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Environmental Impact of Land Use on Water Quality. Final Report on the Black Creek Project. Volume 3. Data Volume

Allen County Soil and Water Conservation District, Fort Wayne, IN

Prepared for

Environmental Protection Agency, Chicago, IL Great Lakes National Program Office

Oct 77

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Agency

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National Program Office
230 South Dearborn Street
Chicago, Illinois 60604

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August, 1978

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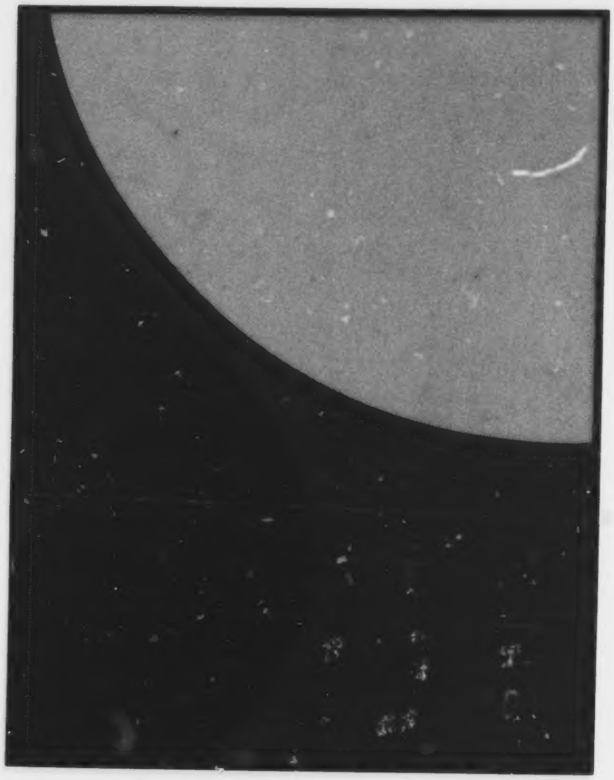

environmental impact of land use on water quality

-project data-

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Final Report on the
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-Technical Report

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16. ABSTRACT

This is the data supporting the Final Technical Report of the Black Creek sediment control project. This project is to determine the environmental impact of land use on water quality and has completed its four and one half years of watershed activity. The project, which is directed by the Allen County Soil and Water Conservation District, is an attempt to determine the role that agricultural pollutants play in the degradation of water quality in the Maumee River Basin and ultimately in Lake Erie.

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ENVIRONMENTAL IMPACT OF LAND USE ON WATER QUALITY

Final Report on the Black Creek Project
(Project Data)

By

James Lake, ***Project Director***
James Morrison, ***Project Editor***

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Great Lakes National Program Office
230 South Dearborn Street, Chicago, Illinois 60604

Ralph G. Christensen, ***Section 108a Program***
Carl D. Wilson, ***Project Officer***

Under U.S. EPA Grant No. G005103 to
ALLEN COUNTY SOIL & WATER CONSERVATION DISTRICT
U.S. Department of Agriculture, SCS, ARS,
Purdue University, University of Illinois

DISCLAIMER

This project has been financed (in part) with Federal funds from the U.S. Environmental Protection Agency under a Section 108(a) grant number G005103. The contents do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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INTRODUCTION

This volume collects many of the important data sets developed during the Black Creek project. It supports the Summary volume and the Technical volume published earlier.

The data is presented in tabular form, graphically, or as simple listings.

In most cases, specific data files are available in machine readable form from the appropriate investigator. These files will be supplied, at cost, to those requesting them. In each case, information concerning the place to request such information is indicated with the data in this volume.

DETAILED METEROLOGICAL DATA

Prior to November, 1975 the primary meterological data collected by the project consisted of rainfall data from several recording gages located throughout the watershed. At that time a fairly comprehensive digital meterological station was installed at site #6 (Upper Black Creek). Subsequently, parameters shown in Table 1 were continually (except for occasional failures of individual transducers) monitored and recorded at two-minute intervals.

TABLE 1
Monitored Meterological Parameters

Parameter	Sensor	Resolution
Rainfall	Tippng Bucket	.25 mm
Wind Run -- 2 m	Cup	1 km
Wind Run -- 6 m	Cup	1 km
Wind Direction	Vane	6 deg
Soil Temperature	Mercury Bulb	.5 deg C
Air Temperature	Mercury Bulb	.5 deg C
Rel. Humidity -- 1.5 m	Hair	2 percent
Barometric Press	Bellows	10 mb

The instrumentation installed at site #6 was designed to record data in an incremental format, (Huggins and Mahler, 1976). In essence, the time at which any variable changed by an amount equal to its sensor's resolution (see Table 1) was recorded. This approach, generally called the incremental integral form, provides a complete record of all significant variations in the level of a parameter within a very compact data format. Such a result is especially beneficial for meterological data which tends to have widely differing rates of change.

As a result of the basic nature of the field recording equipment and because of a desire to maintain a very efficient data file structure, the detailed meterological data available from the project has been edited to remove erronerous data and then stored in a format analogous to the incremental integral concept. The primary disadvantage of this is that "machine processing" of a data file is necessary to convert the information into form that is easily intelligible.

Data from the meterological station is organized into a separate yearly file for each parameter. Each file contains header information consisting of site identification information, transducer characteristics and an initial parameter value (benchmark data) for conditions at midnight on January 1. The remainder of the file consists of the time into the year at which the level of the parameter changed by a fixed increment. Imbedded flags indicate periods of transducer malfunction and/or estimated data values.

The parameter data files may be "decoded" into a format which is more convenient for human reading by the use of programs, written in BASIC, which are available for distribution with the data files. Two data formats are available for distribution, one which requires a BASIC interperter with virtual array cababilities and one which avoids this constraint by writing the files in ASCII format. The files stored in virtual array format are only one-half as large as those which have the same information stored in ASCII format.

REFERENCES

Huggins, L.F. and S.J. Mahler. 1976. Environmental data acquisiton and real-time computers. EPA 905/9-76-005. Best Management Practices for Non-Point Source Pollution Control Seminar. pp. 164-170.

HYDROLOGICAL DATA

The following figures present data from the Smith-Fry Drain (Site 2), the Dreisbach Drain (Site 6), and the Maumee River (Site 14). The Dreisbach Drain is located along the western boundary of the watershed and the Smith-Fry Drain is located along the eastern boundary. Their drainage areas, of comparable size, represent the greatest contrast in soil and land use within the watershed. The drainage area of the Dreisbach Drain contains 74 percent rolling and 26 percent nearly level topography while that of the Smith-Fry Drain contains only 29 percent rolling and 71 percent nearly level topography. The land use is also quite different with 35 percent of the drainage area of the Dreisbach Drain in row crops as compared to 63 percent for the drainage area of the Smith-Fry Drain. The drainage area of the Dreisbach Drain also contains the town of Harlan which has an effect on water quality in that stream. Characteristics of these two drainage areas as well as those for the Black Creek Watershed are given in the following table. Note that characteristics of the total watershed are very similar to those for the drainage area for the Smith-Fry Drain.

Characteristics of the Areas Studied

Characteristics	Smith-Fry Drain	Dreisbach Drain
Drainage area:	942 ha	714 ha
Soil groups:		
Lake plain & beach ridge	71%	26%
Glacial till	29%	74%
Land use:		
Row crops	63%	35%
Small grain & pasture	26%	48%
Woods	8%	5%
Urban, roads, etc.	3%	12%
Homes:	28	143

Sediment and nutrient yields from the Black Creek Watershed and the drainage areas for the Dreisbach Drain and Smith-Fry Drain were determined by integrating sediment and nutrient concentrations with flow rates. Stage-discharge relationships were developed for the outlets of these study areas to give flow rates. Water stages were recorded continuously at these locations with a pressure-type stage recorder (Model 12 Flow Recorder, Foxboro). (Product descriptions and manufacturers are given for reader information and should not be construed as endorsements.)

Water samples for determining the concentrations of sediment and nutrient were collected either manually or with automated samplers. Grab Samples were collected each week and also during storm events. The automated samplers were triggered at a set minimum stage and then continued to operate automatically until the sample storage was exhausted or the stage fell below the set minimum stage. The water samples were normally collected and the automated sampler reset before the sample storage was exceeded.

Three automated pumping samplers (PS-69, U.S. Interagency Sedimentation Project) were installed at the junctions of the Dreisbach and Smith-Fry Drains with Black Creek and on the main stem of Black Creek near its entrance into the Maumee River. Each sampler was capable of automatically collecting 72 samples of 500 ml each at a chosen time interval.

Maumee River data are based on weekly and in same cases event related grab samples. Stage data are also based on weekly and in some cases events related measurements. All work was done at the Highway 100 bridge over the Maumee.

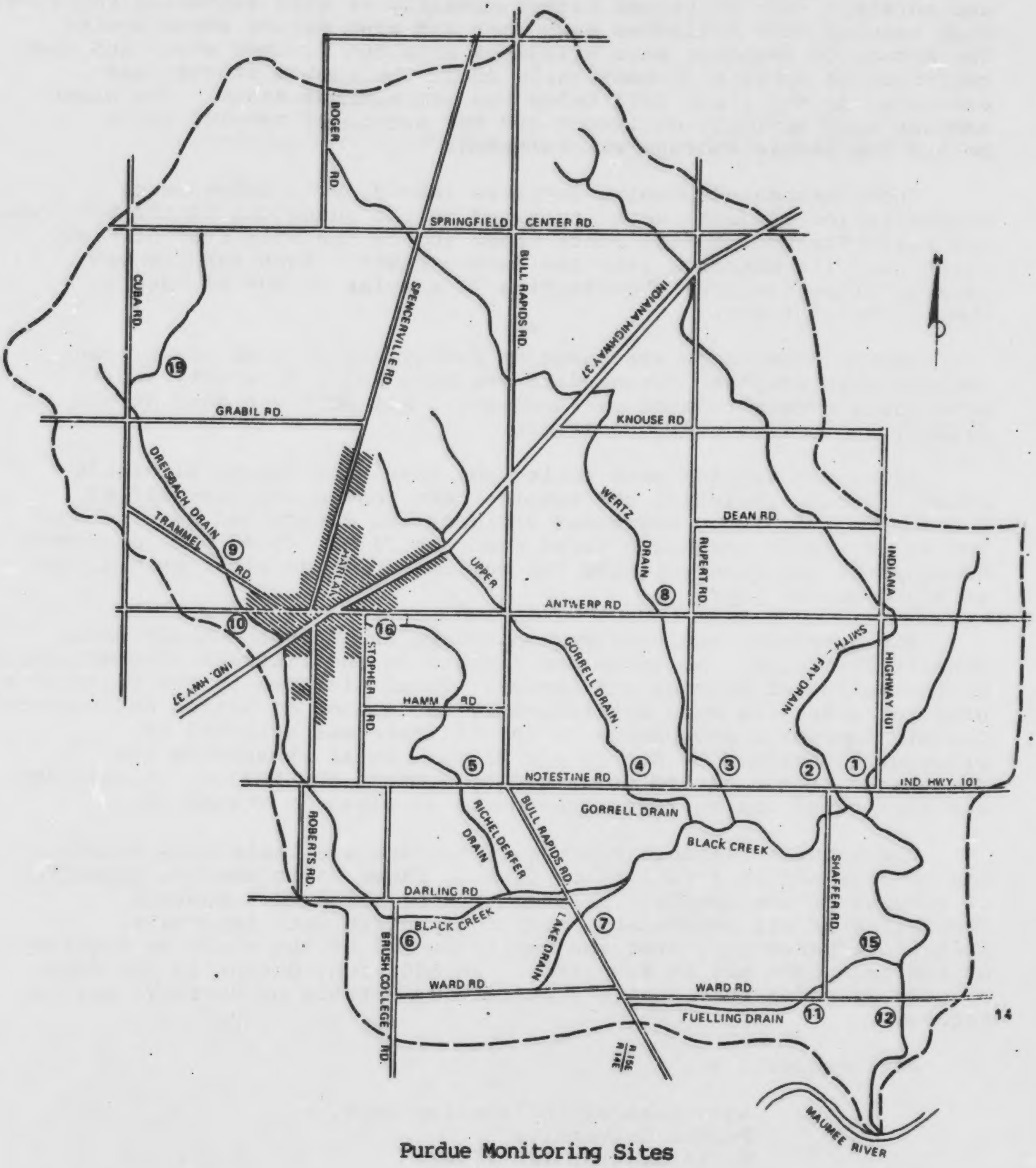
After the samples were collected, they were frozen within 24 hours. Before analysis, the samples were thawed and one-half of the sample filtered. Suspended sediment was determined by passing 200 ml of runoff through a tared membrane filter (0.40 pore diameter, Nucleopore) and then weighing the collected solids after oven drying at 105°C for 24 hours.

The nutrients analyzed were nitrogen and phosphorus and their constituent forms. Ammonium and nitrate in the filtrate were determined by the method of Bremner and Kenney. Total nitrogen in the filtered and unfiltered samples were determined by the method of Nelson and Sommers. Soluble inorganic phosphorus in the filtrate was analyzed by procedures outlined by Murphy and Riley. Total phosphorus was determined by the method described by Sommers and Nelson. A detailed description of the analyses procedures is given in Volume II.

The machine readable water quality data available from Purdue can be obtained in a variety of forms. These forms consist primarily of subsets of the complete file containing all data. Subsets consisting of all parameters covering specific date intervals, individual parameters over the entire period of the study or combinations of the groupings may be requested. In addition, output in the form of punched cards or magnetic tape (either 7-track or 9-track) may be reqested.

Mail requests to:

Agricultural Engineering Dept.
Purdue University
W. Lafayette, IN 47907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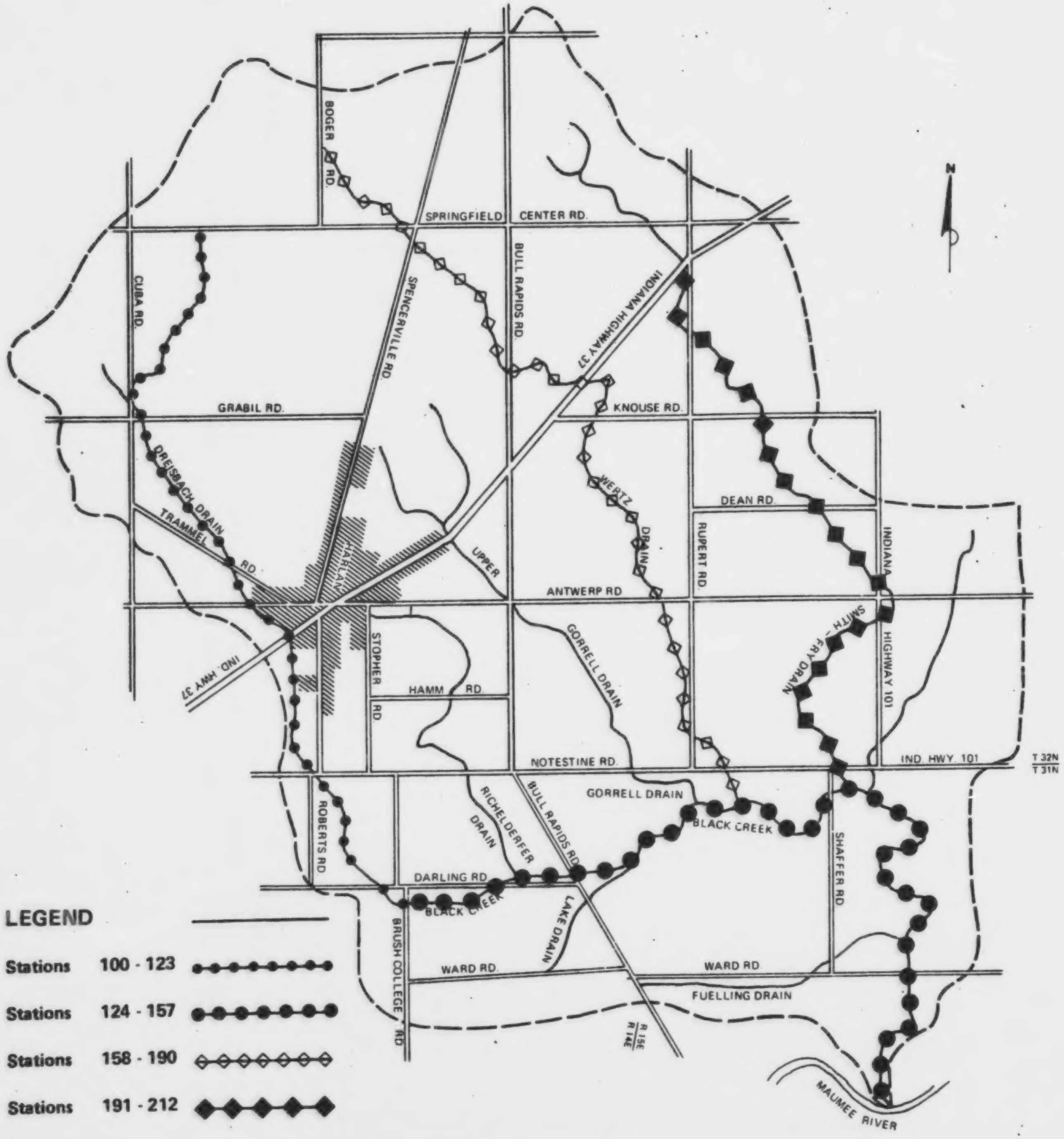
Purdue Monitoring Sites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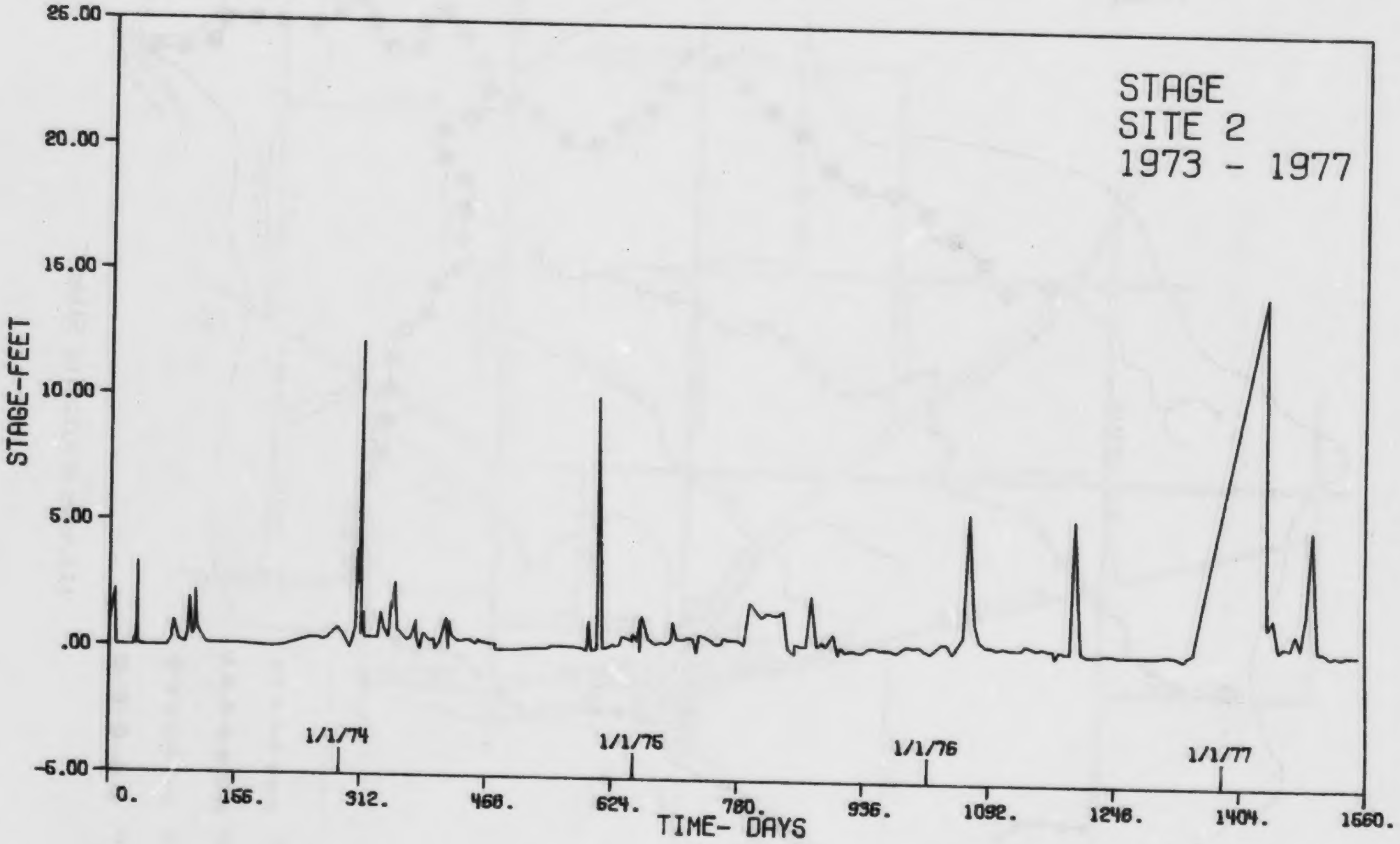
Stations 100 - 123
Stations 124 - 157
Stations 158 - 190
Stations 191 - 212

Illinois Monitoring Sites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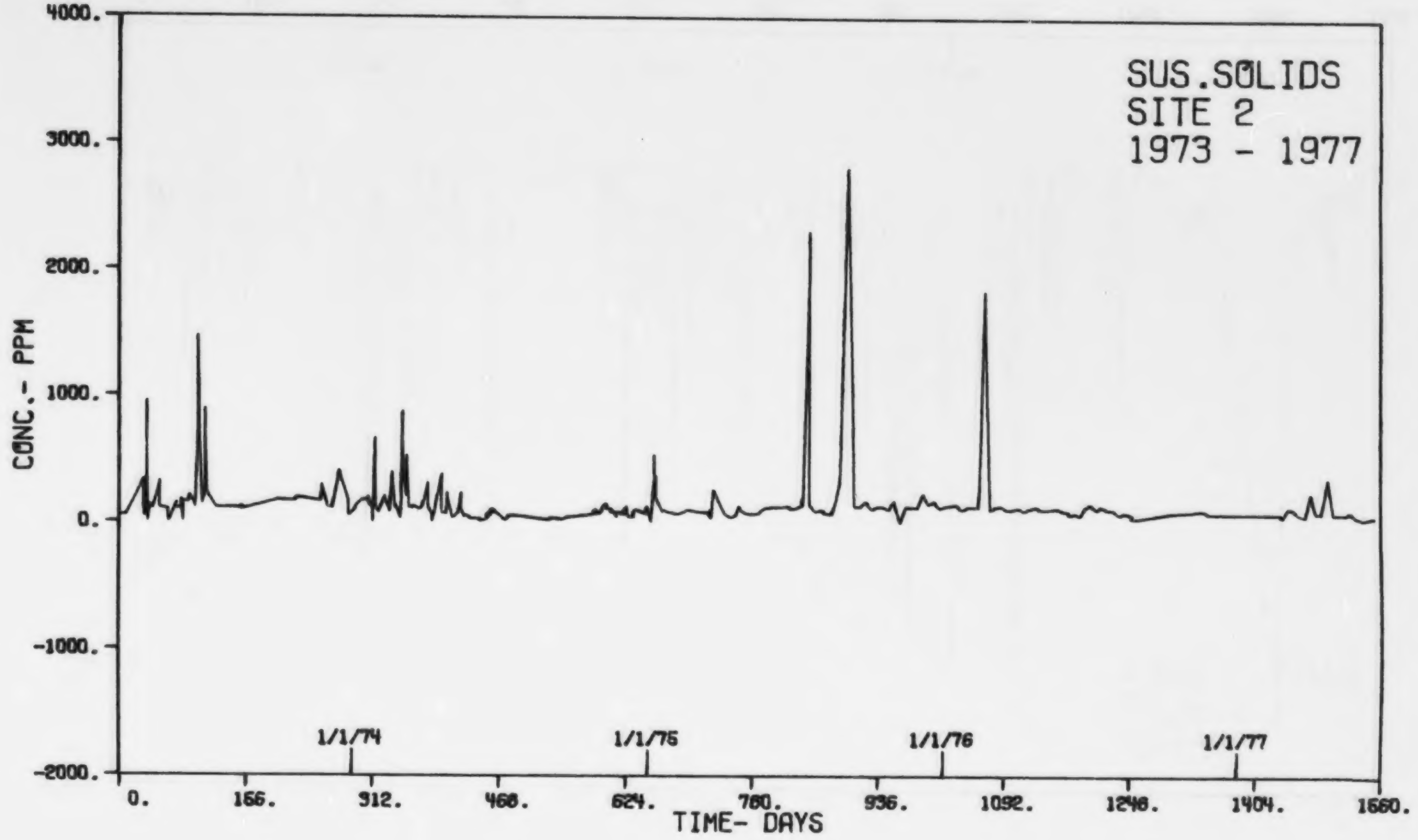
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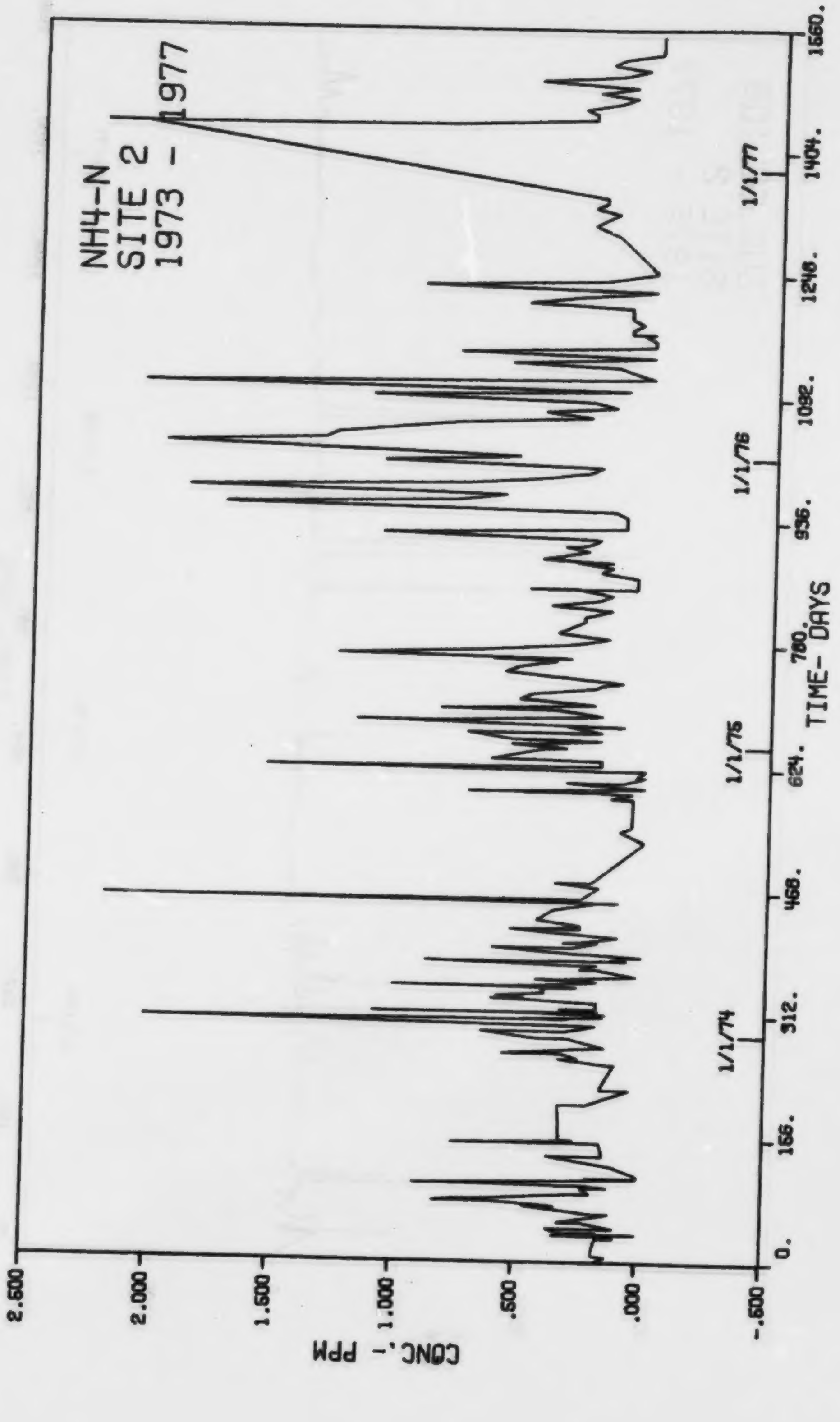
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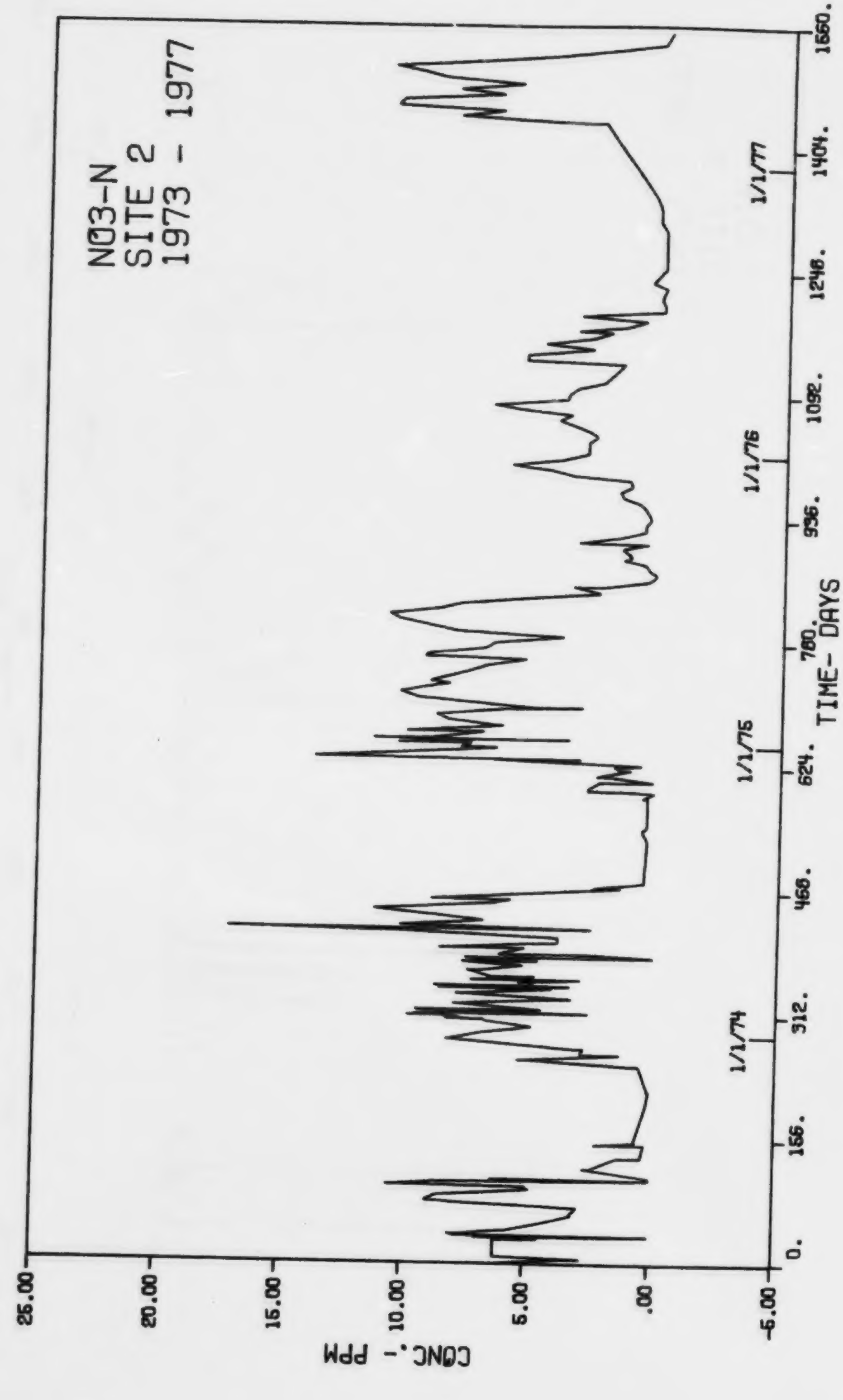
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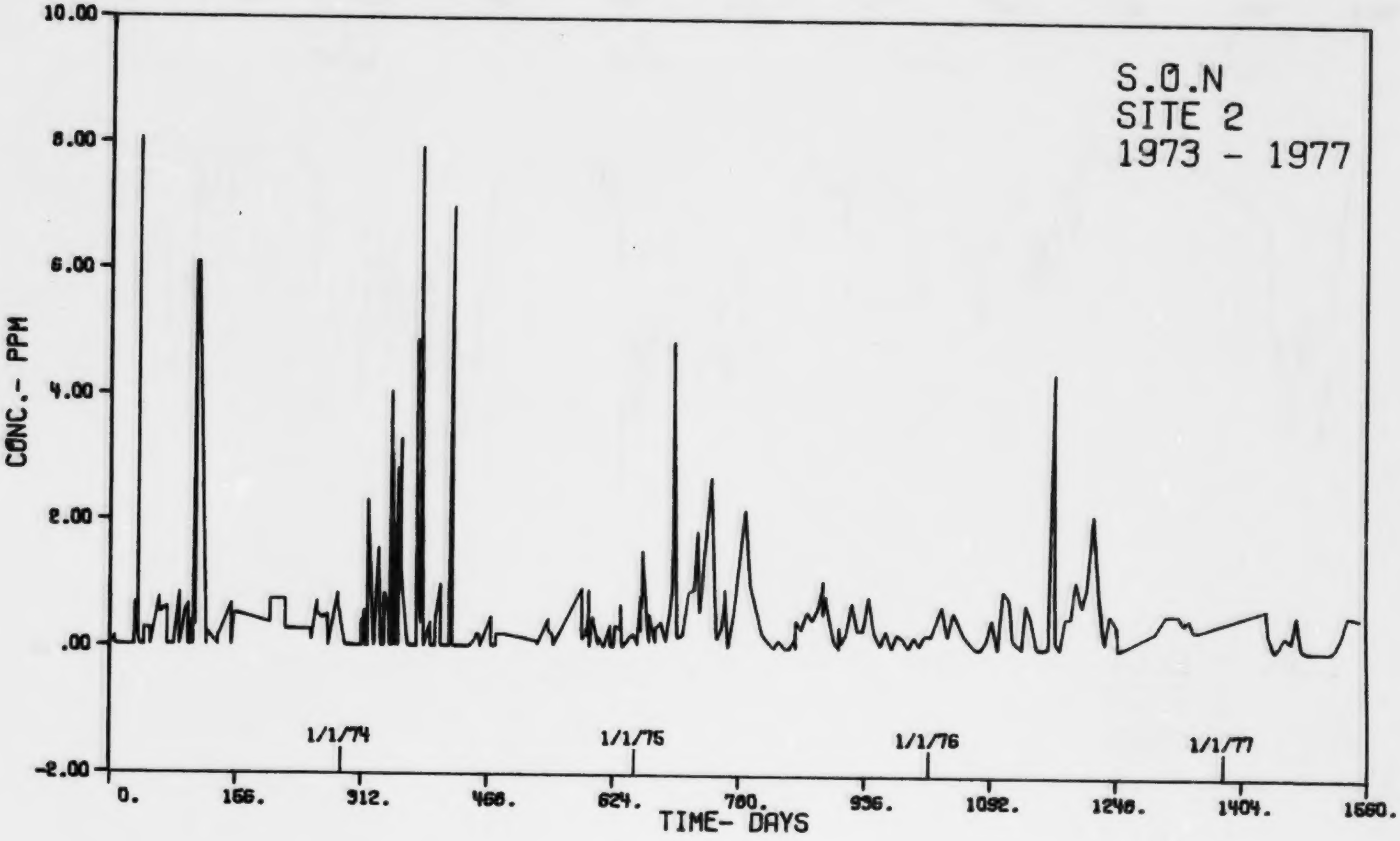
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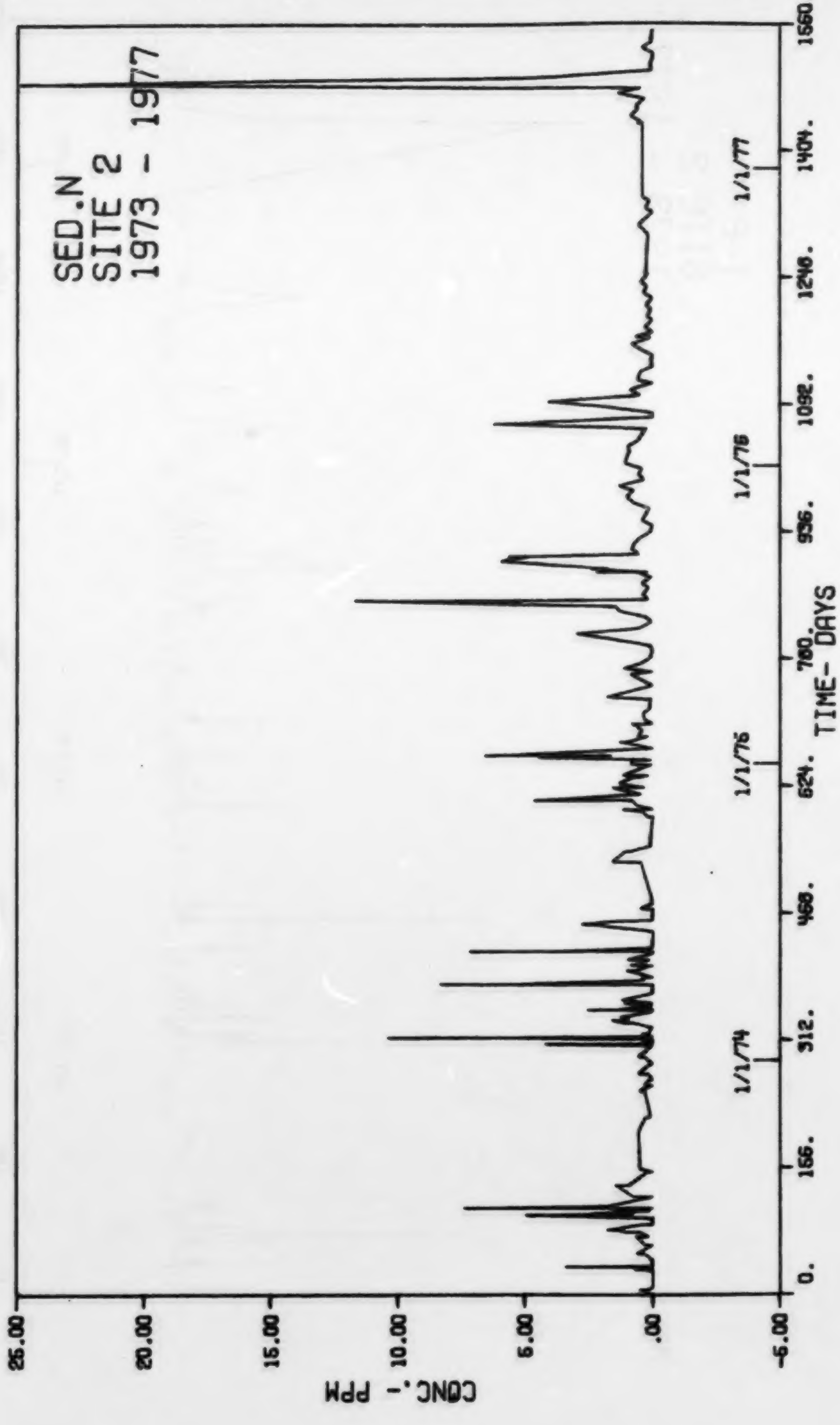
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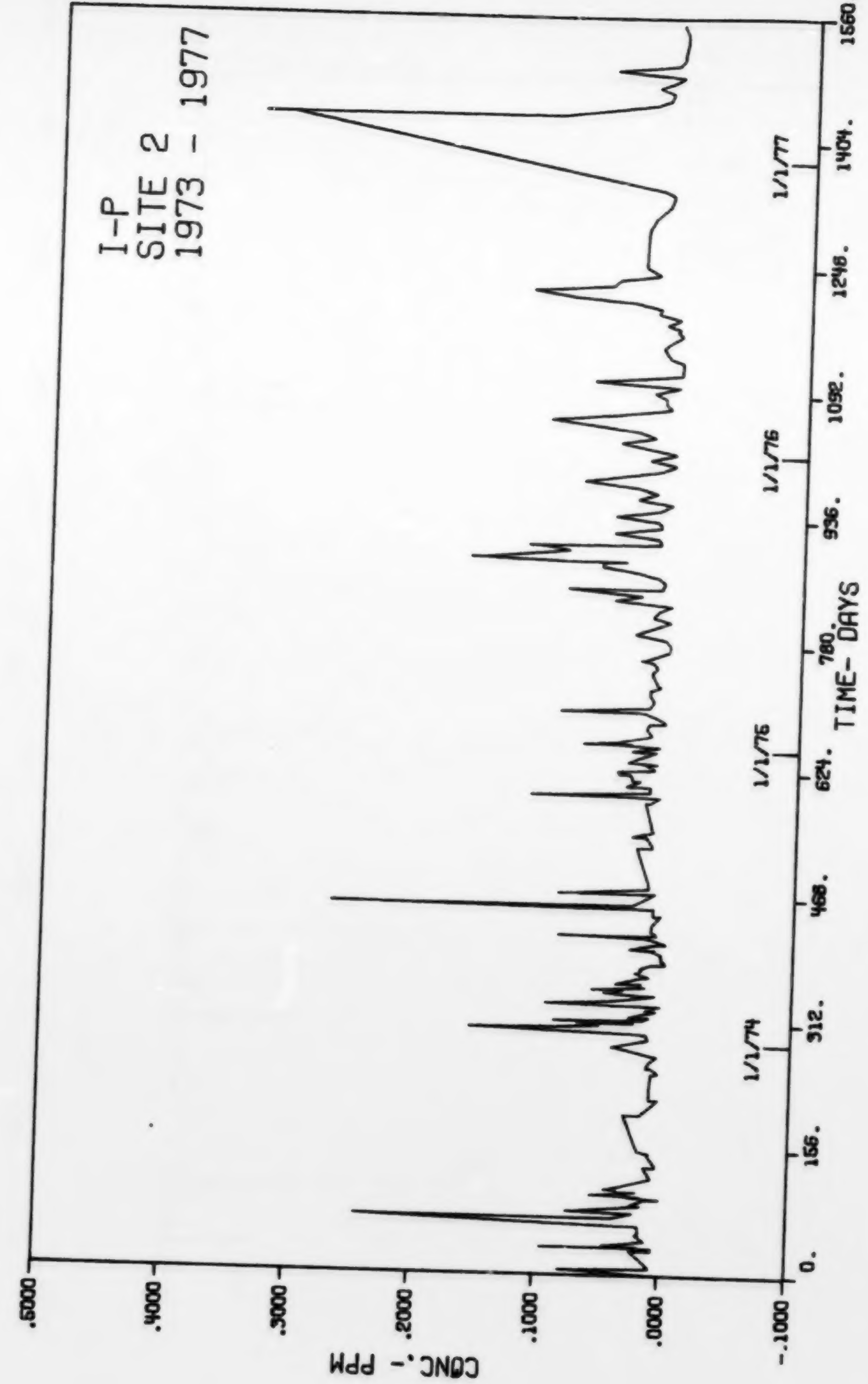
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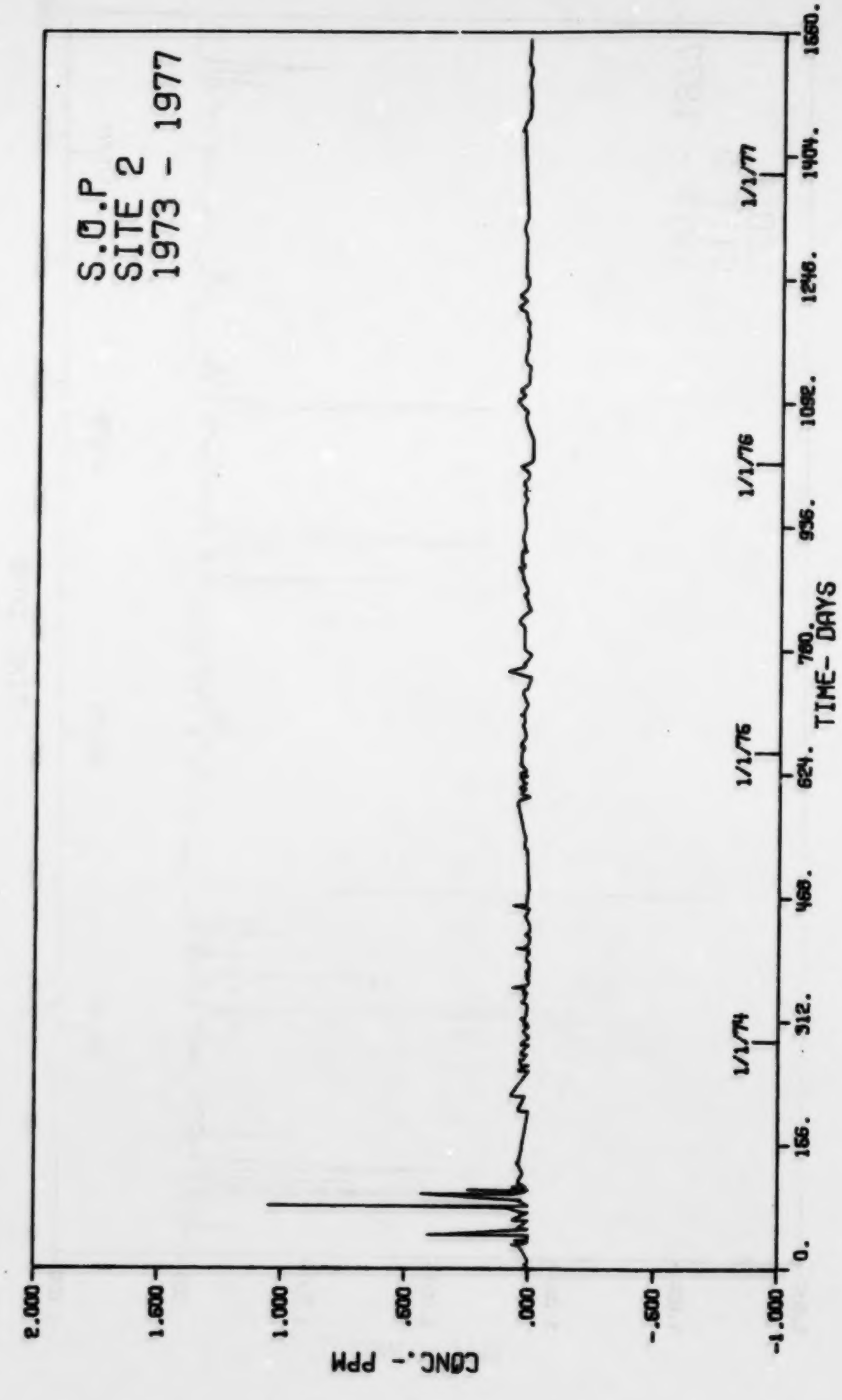
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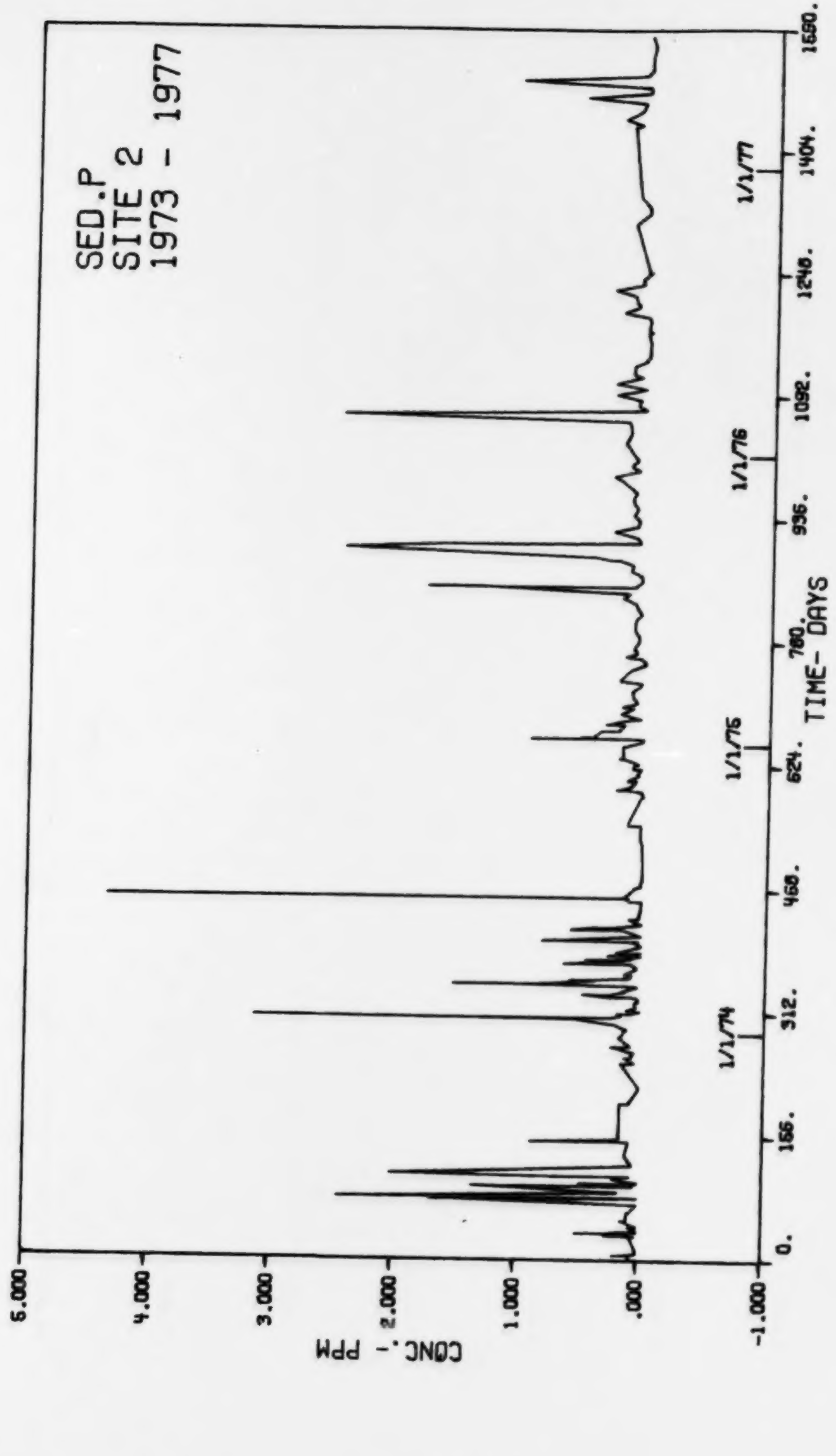
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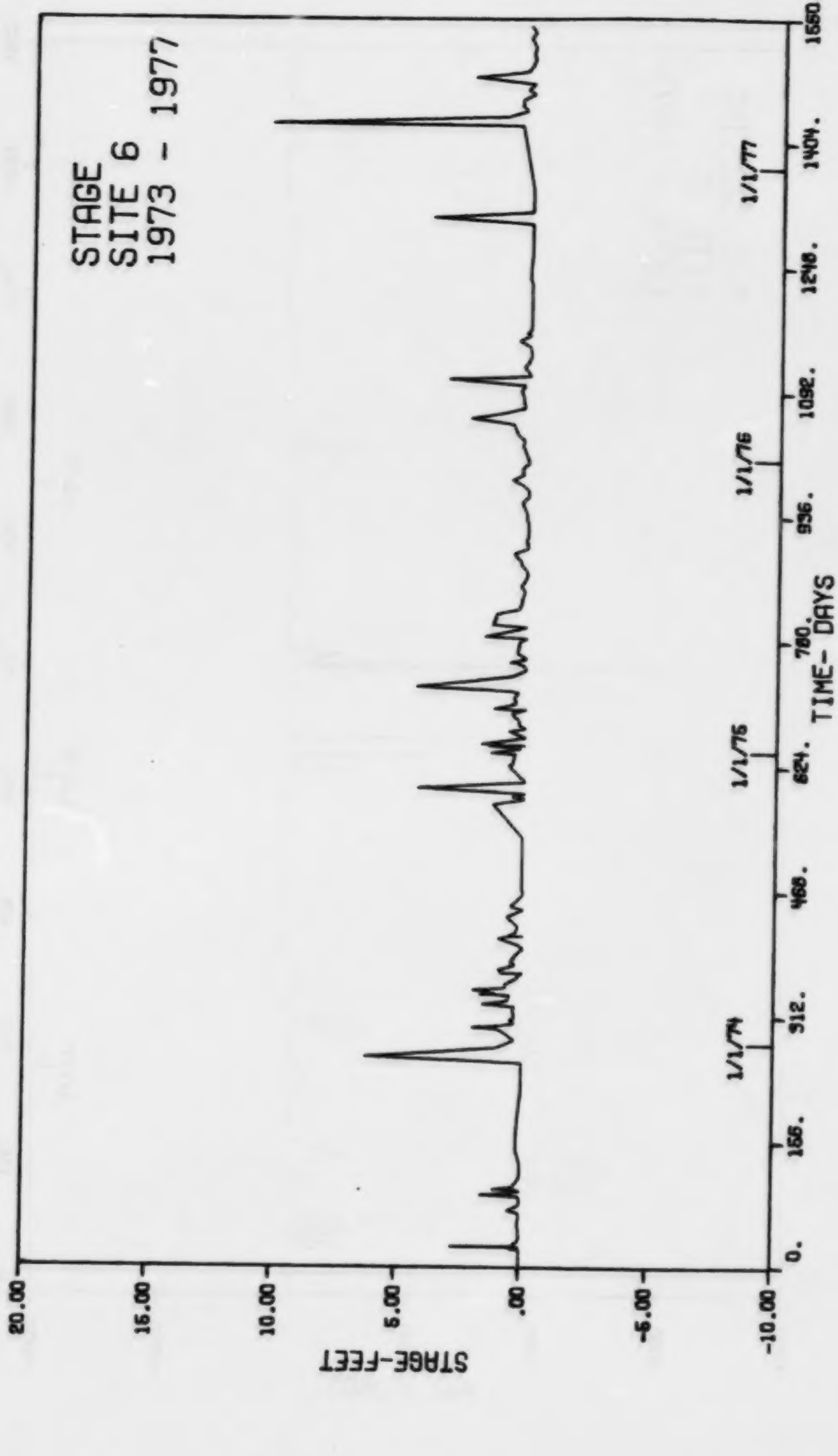
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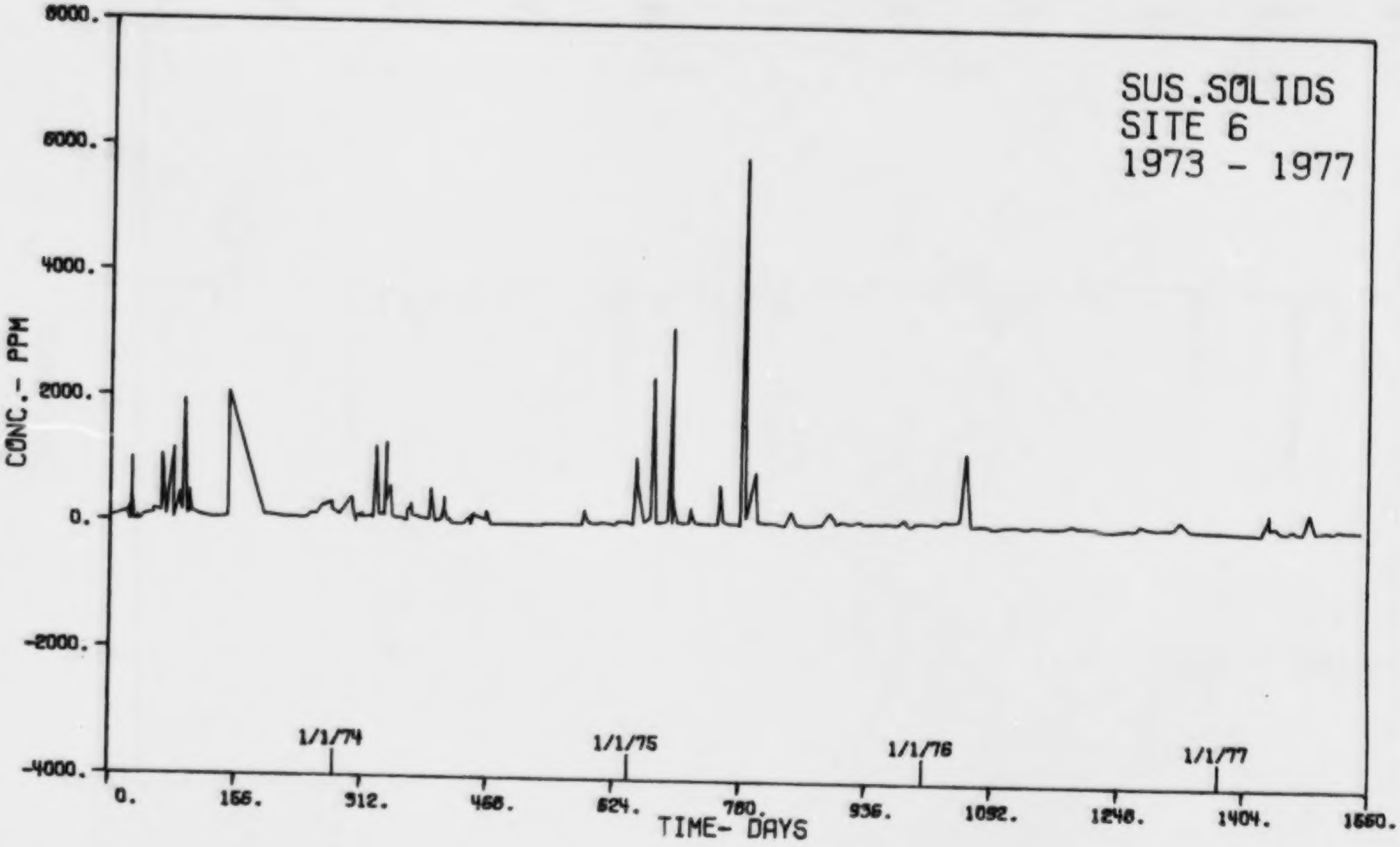
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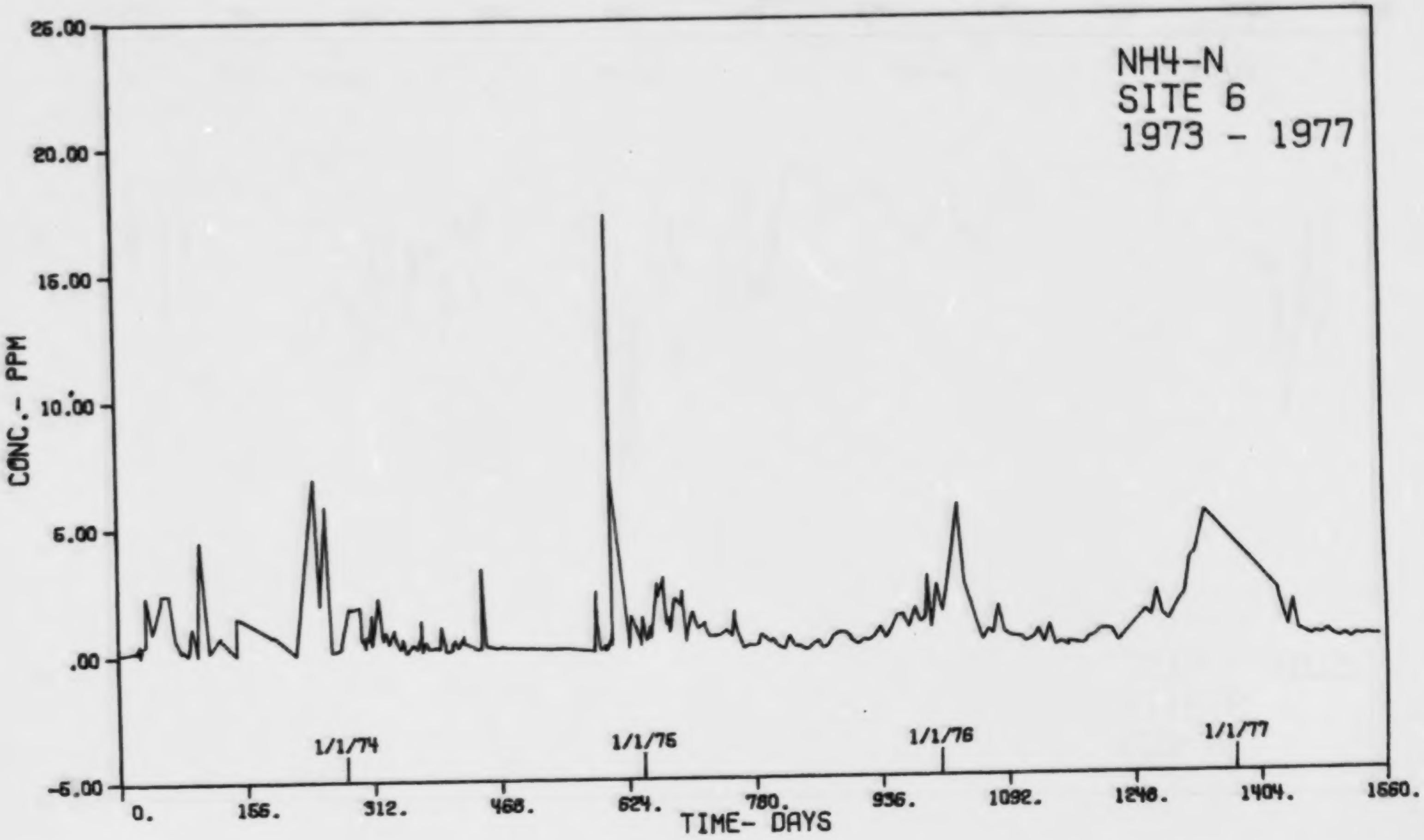
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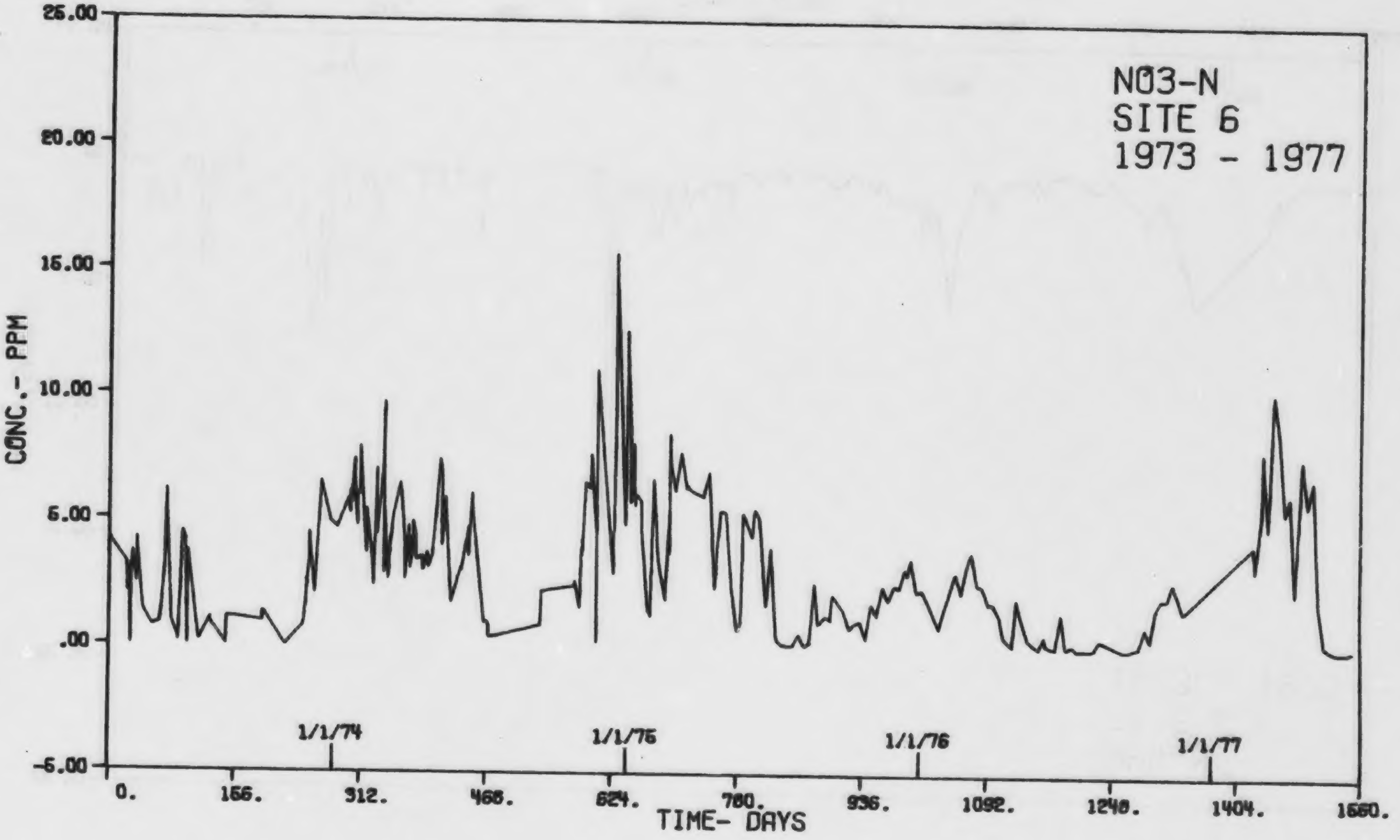
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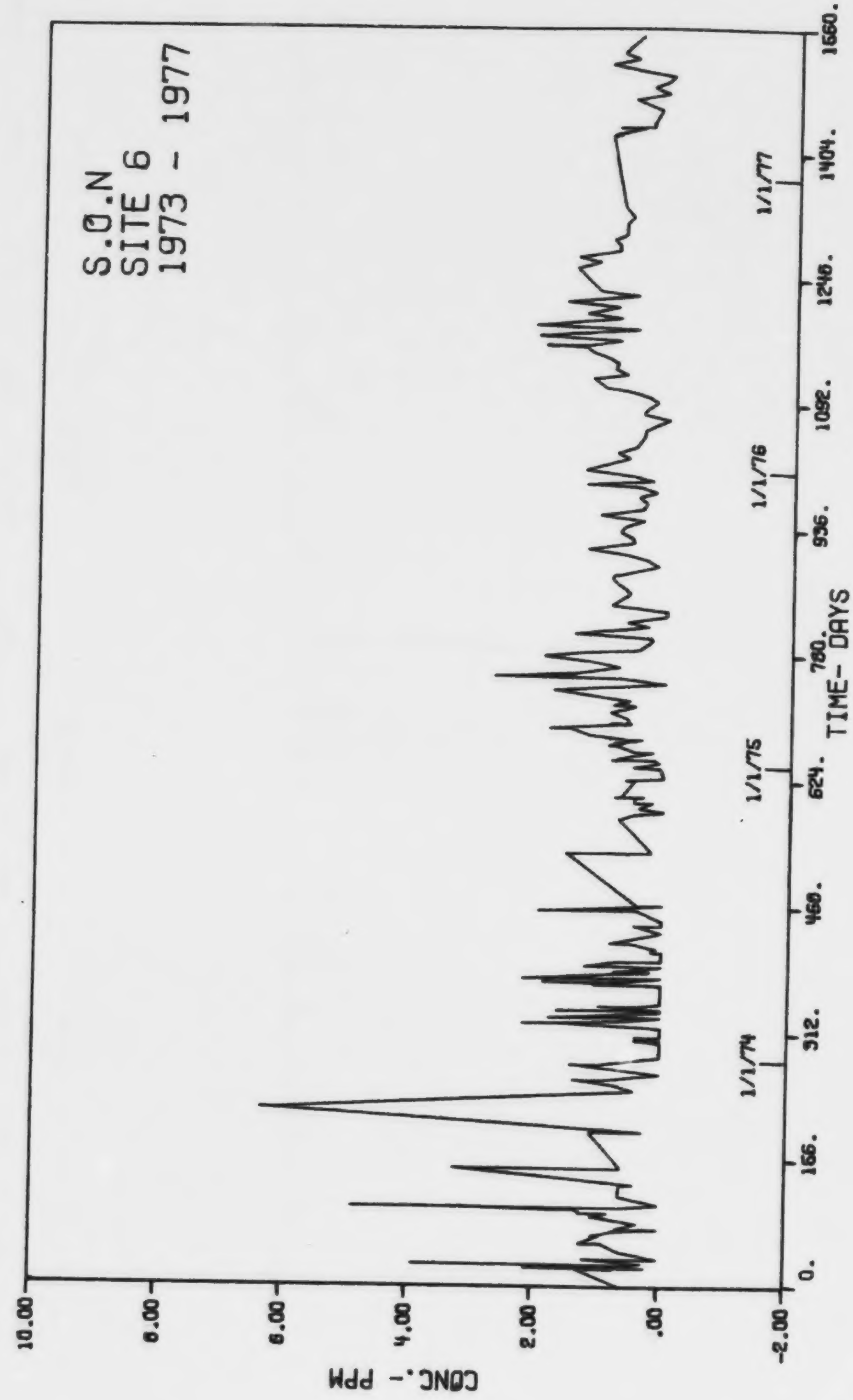
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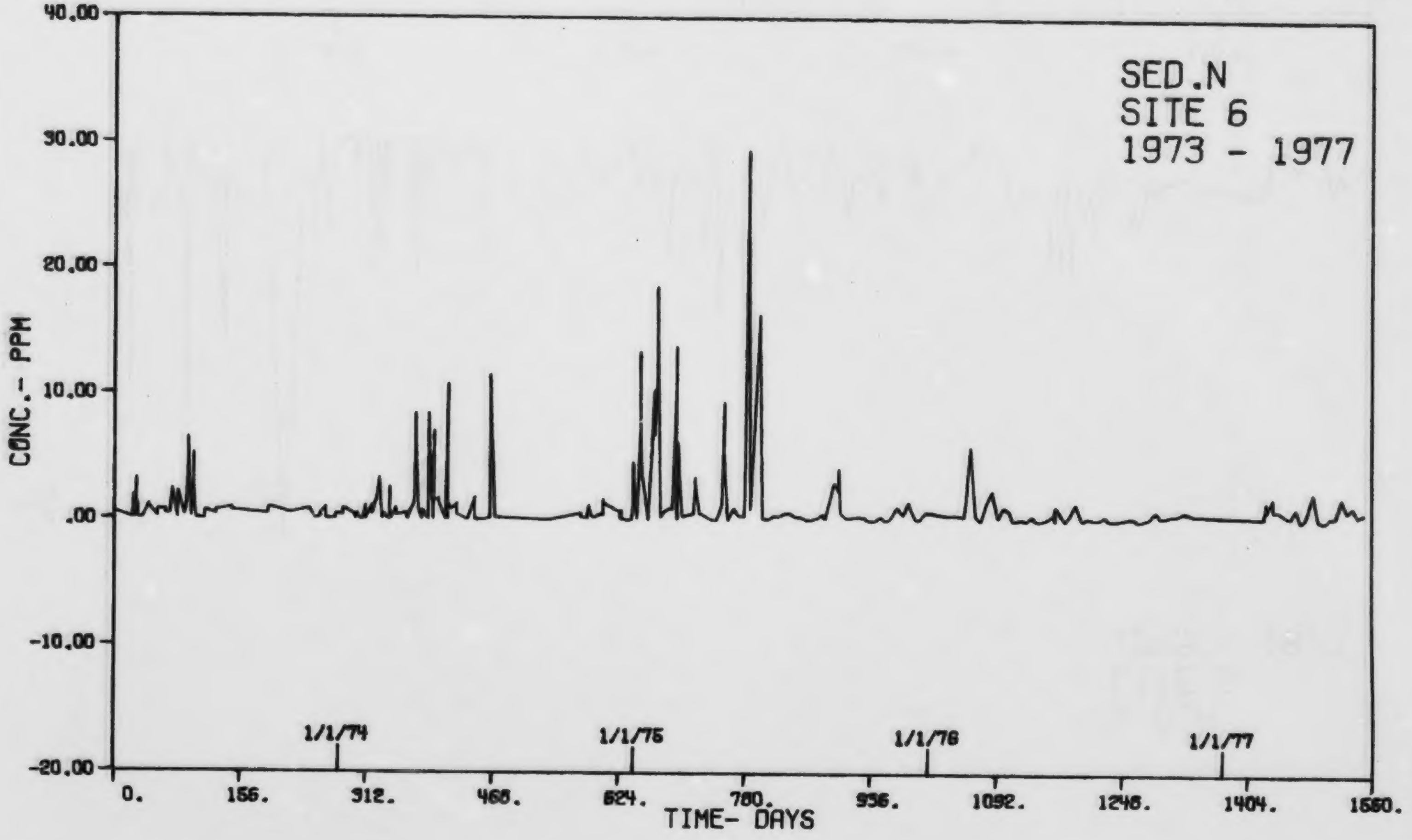
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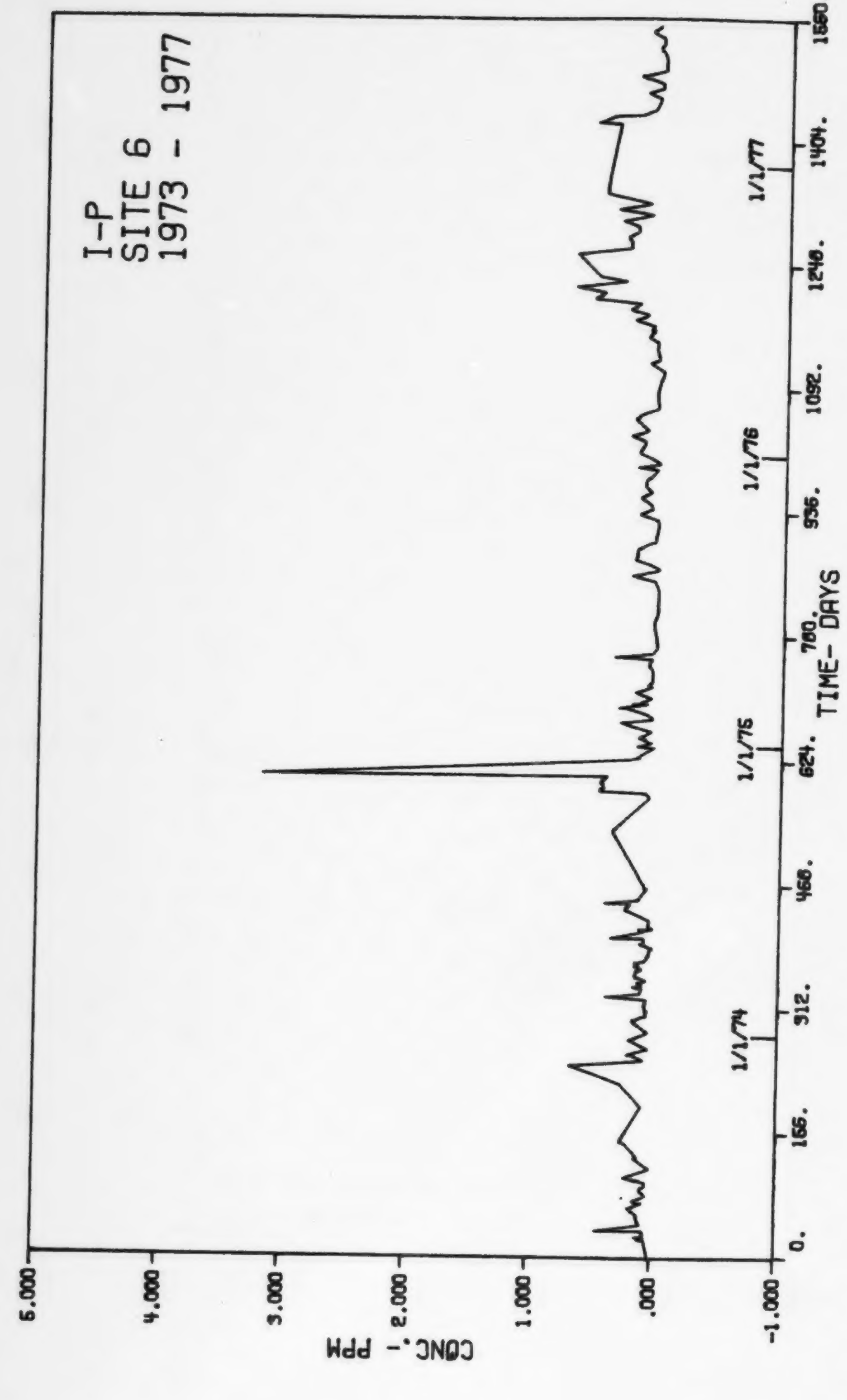
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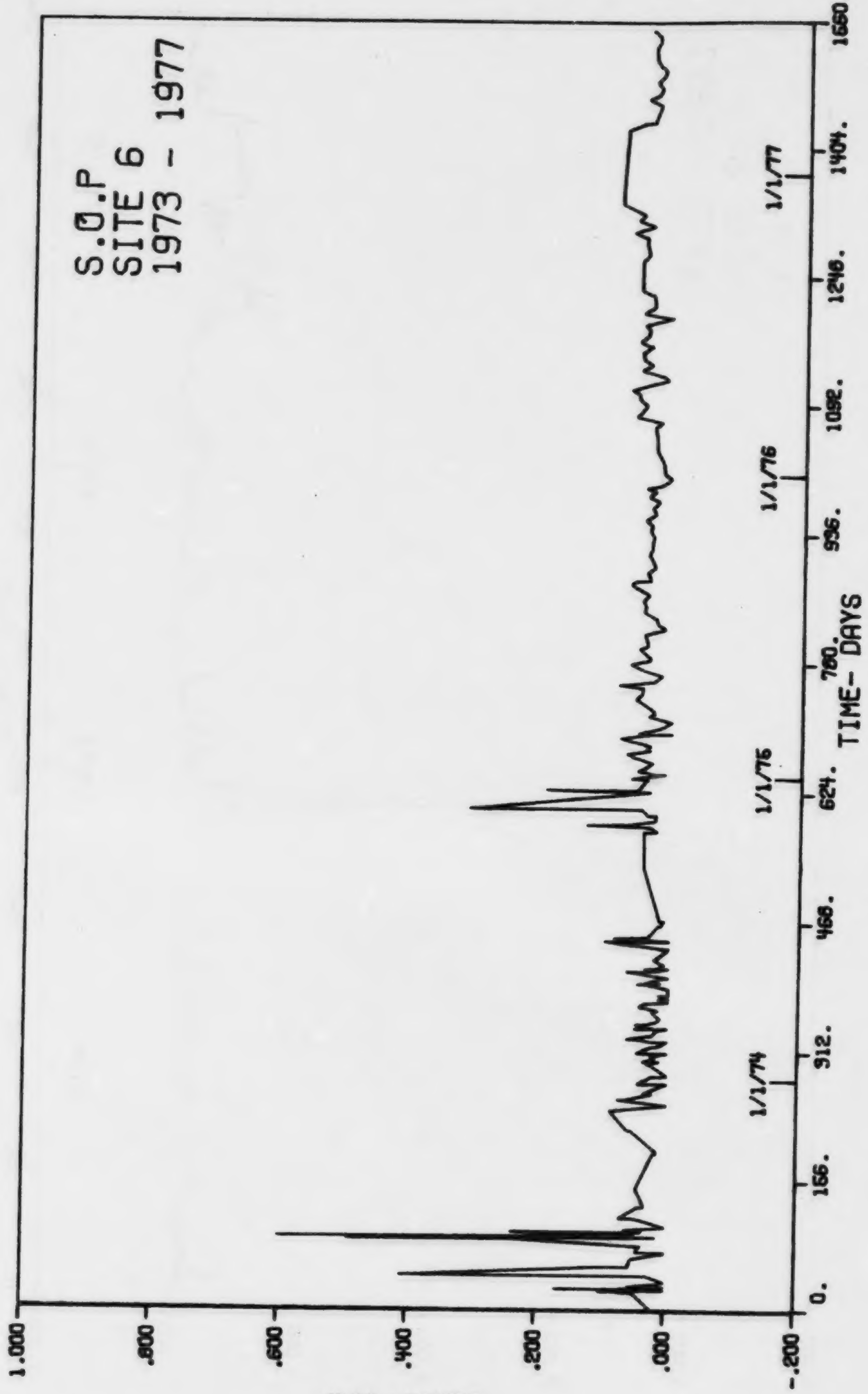
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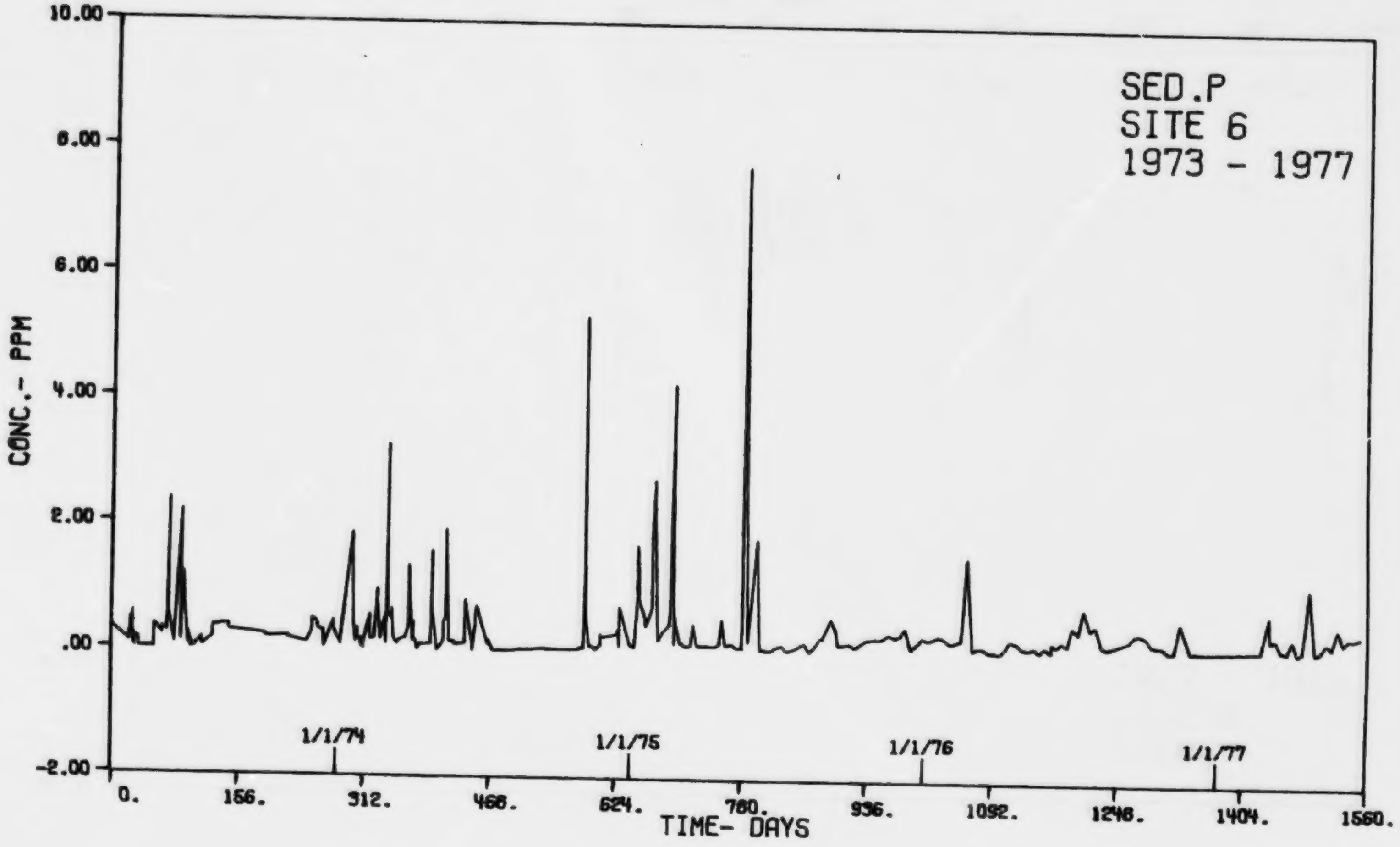
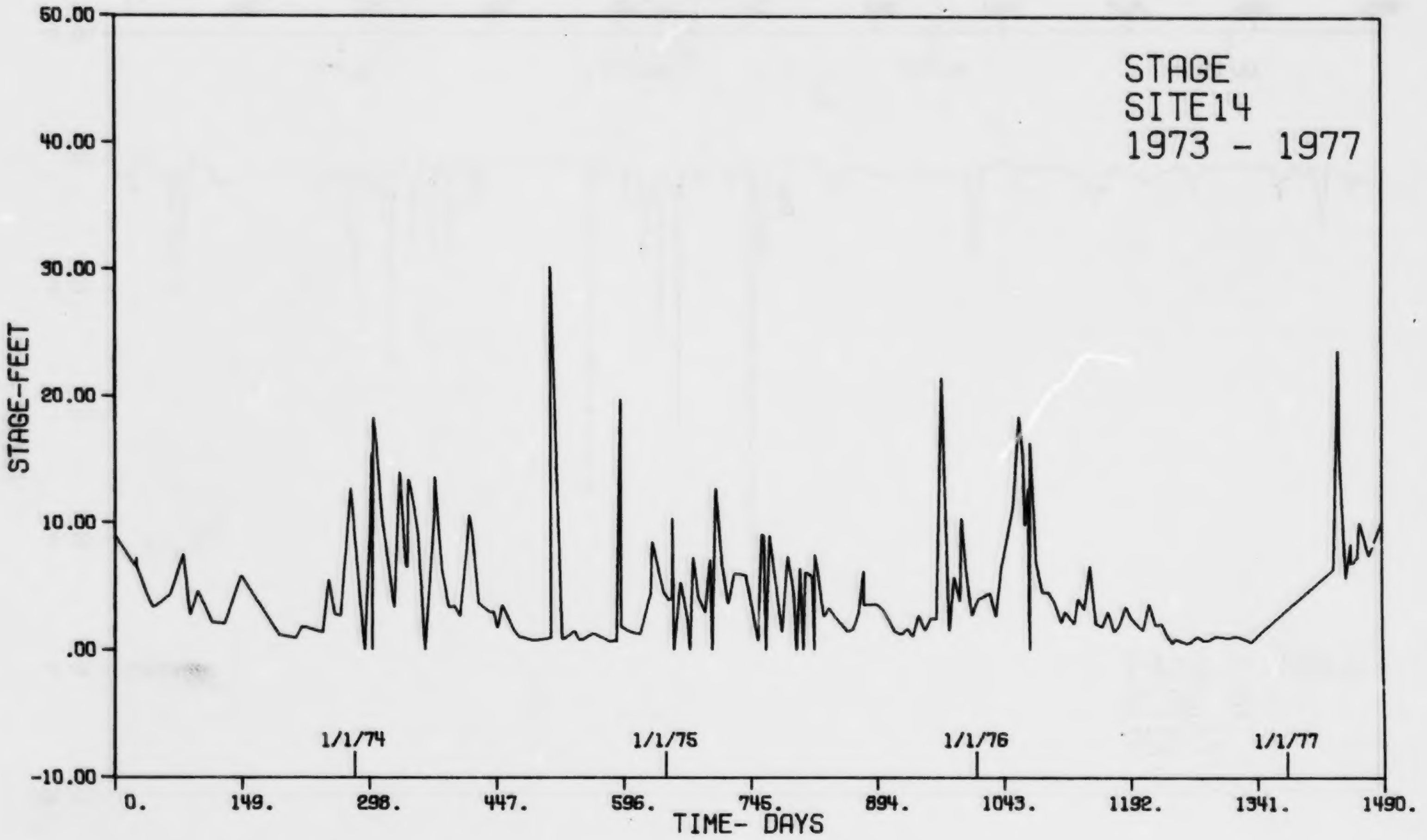
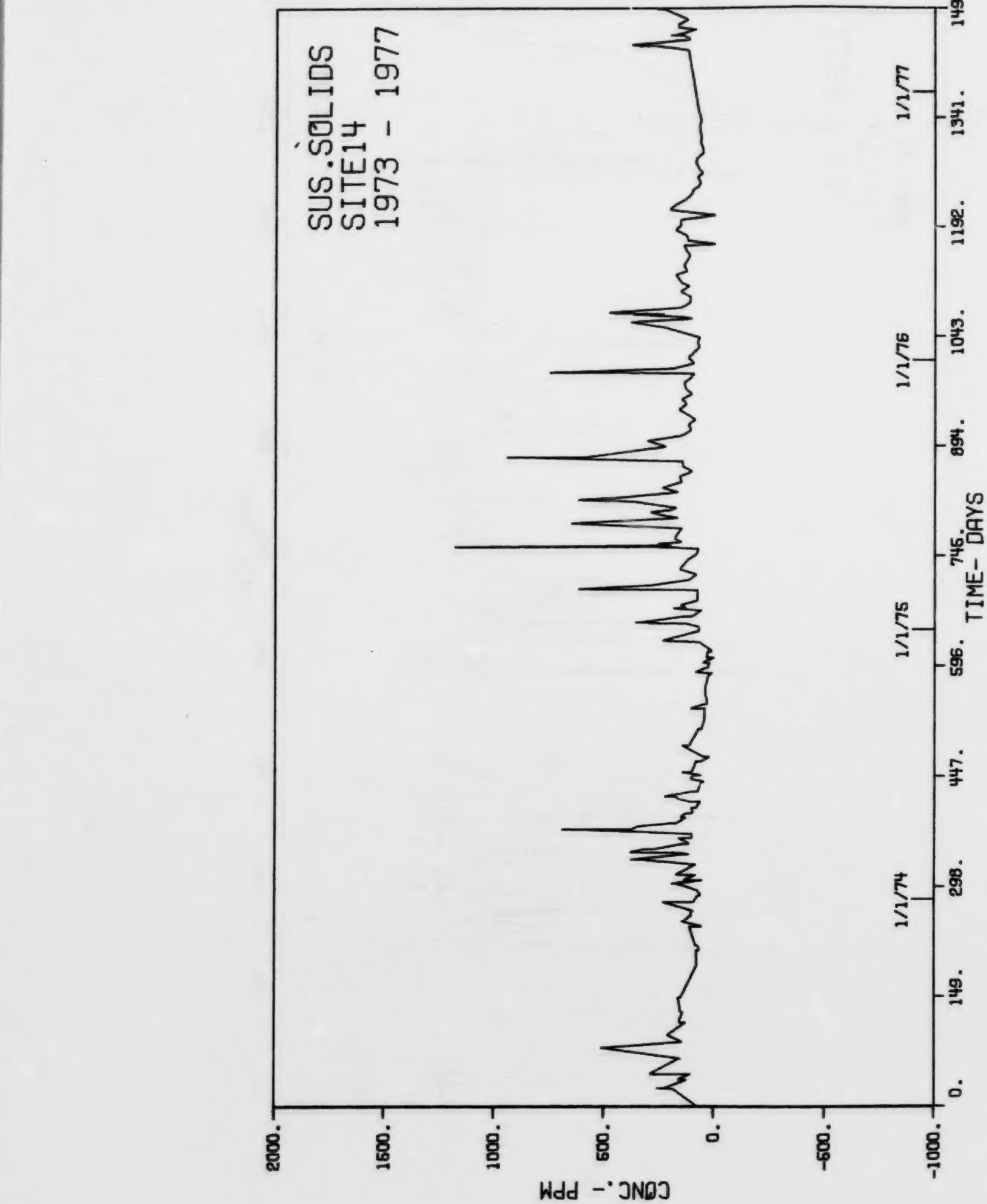
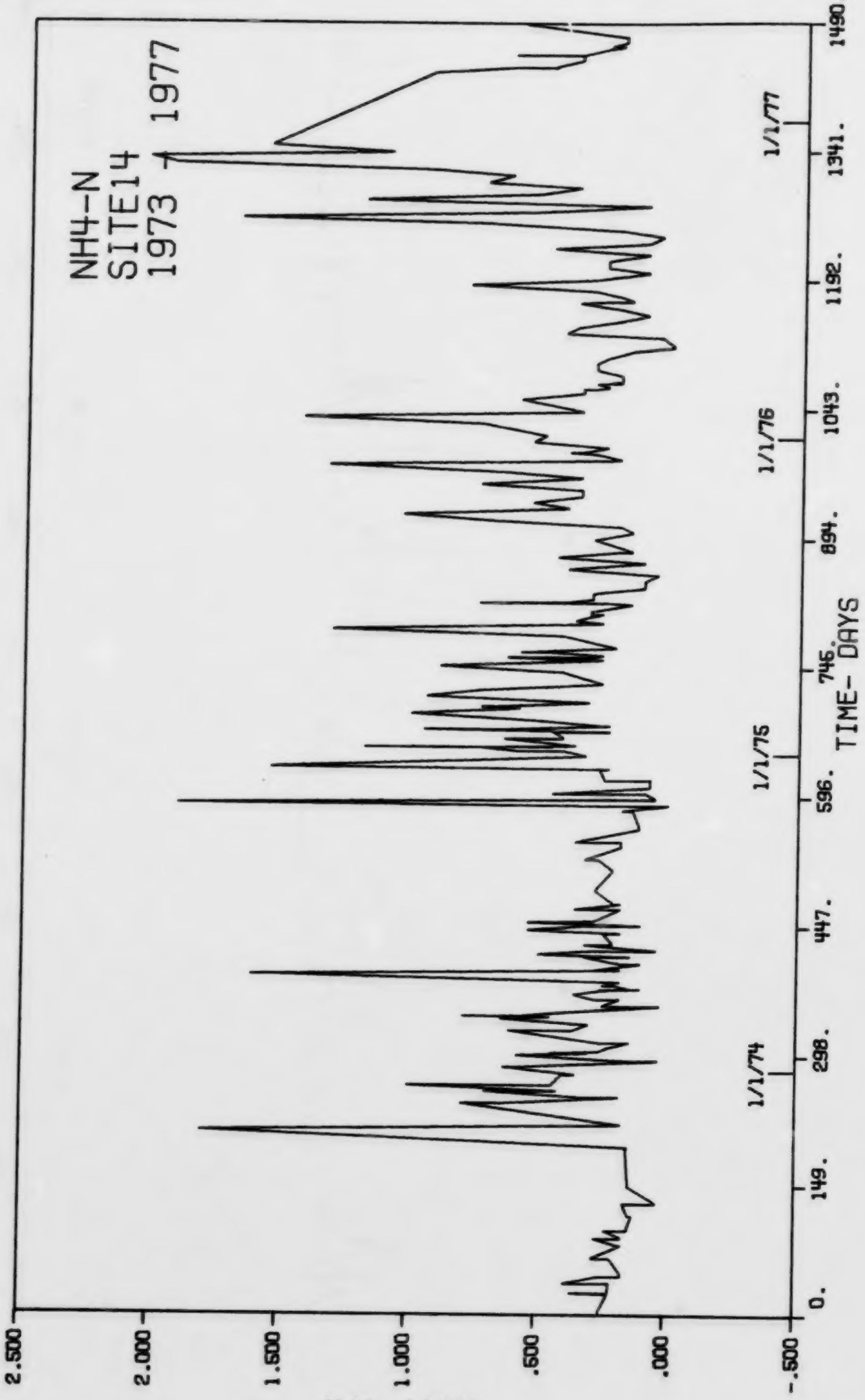
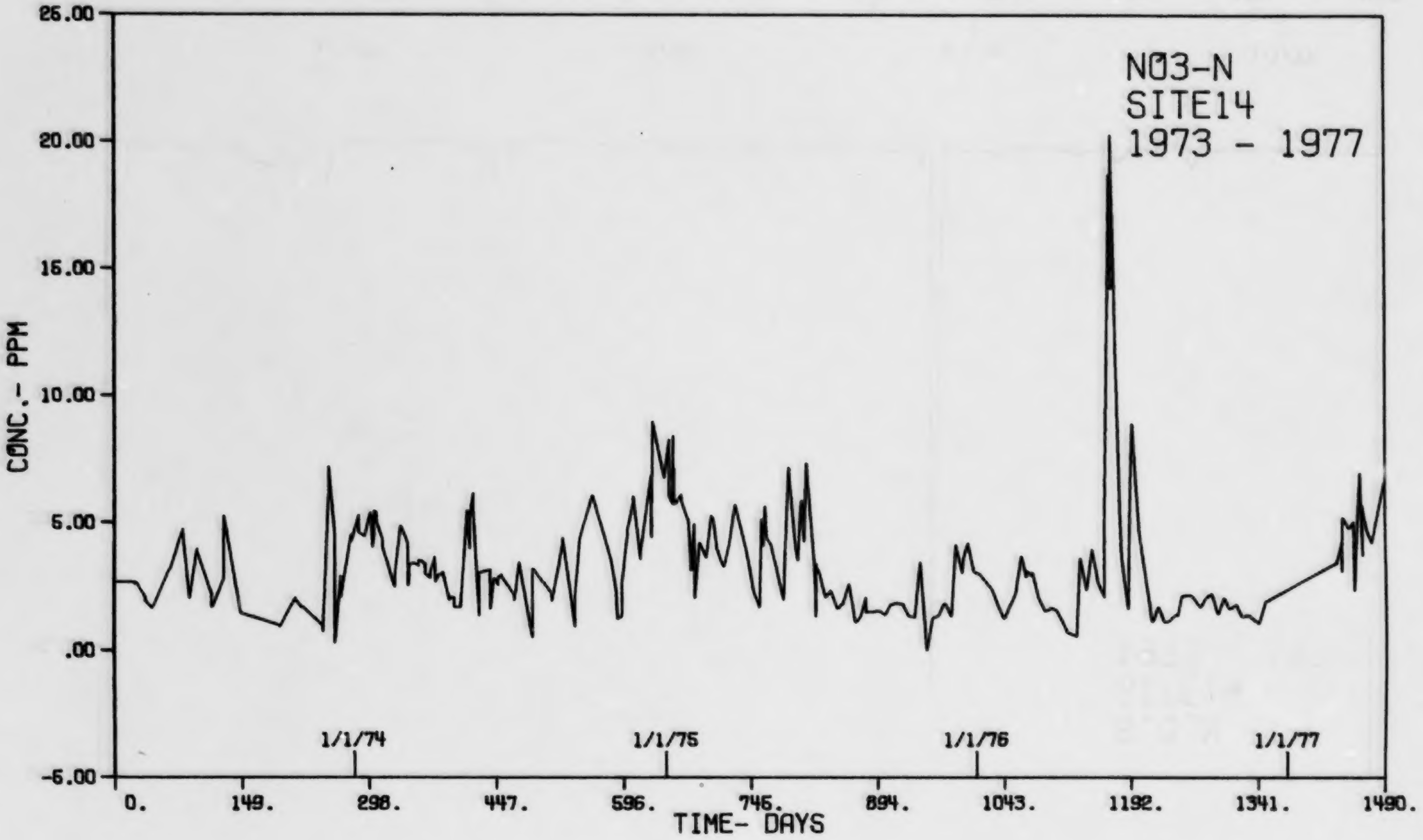
-.200
TIME- DAYS
0.
156.
312.
468.
624.
780.
936.
1092.
1248.
1404.
1560.
1/1/74
1/1/75
1/1/76
1/1/77

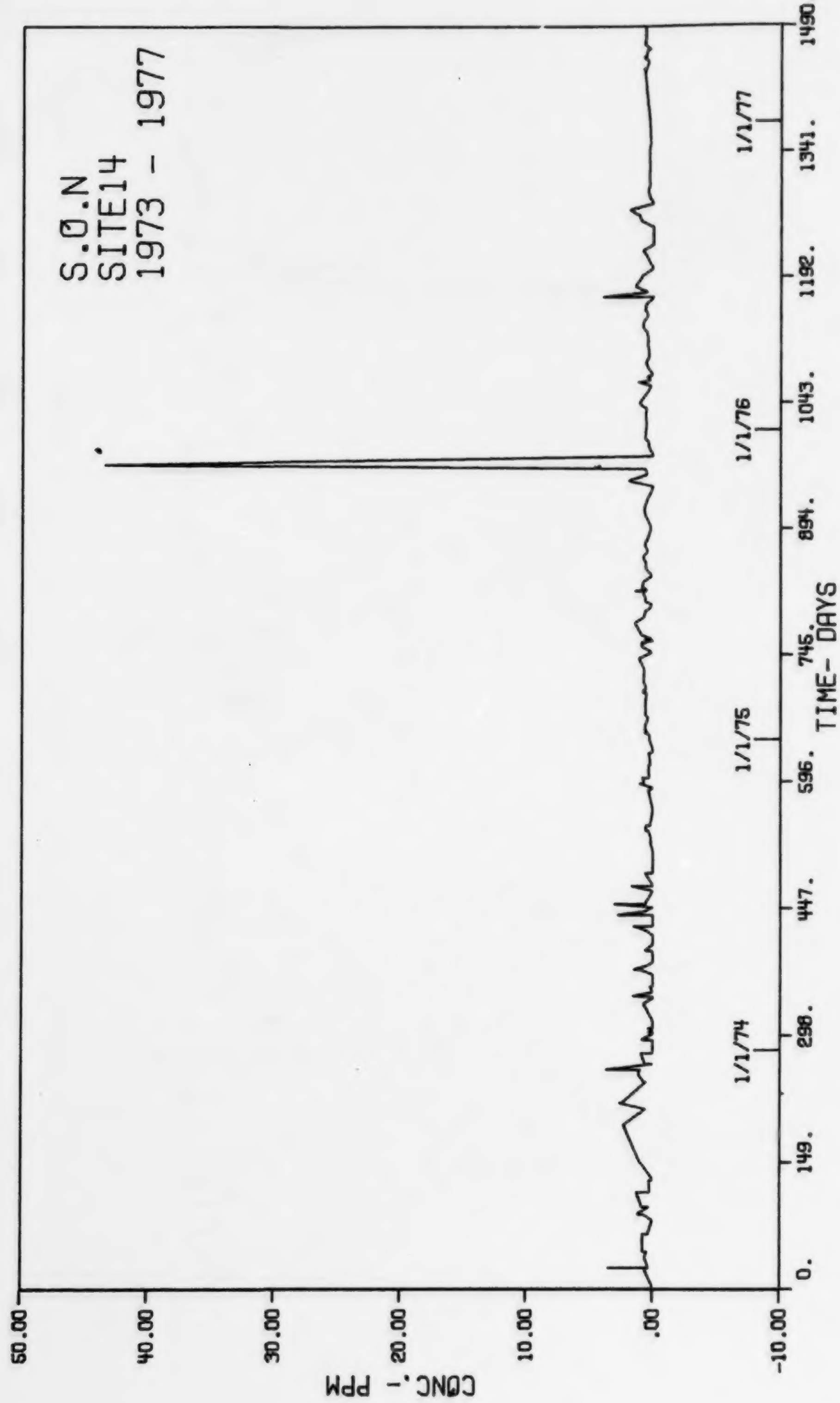

SED.P
SITE 6
1973 - 1977
CONC.- PPM
10.00
8.00
6.00
4.00
2.00
.00
-2.00
TIME- DAYS
0.
156.
312.
468.
624.
780.
936.
1092.
1248.
1404.
1560.
1/1/74
1/1/75
1/1/76
1/1/77

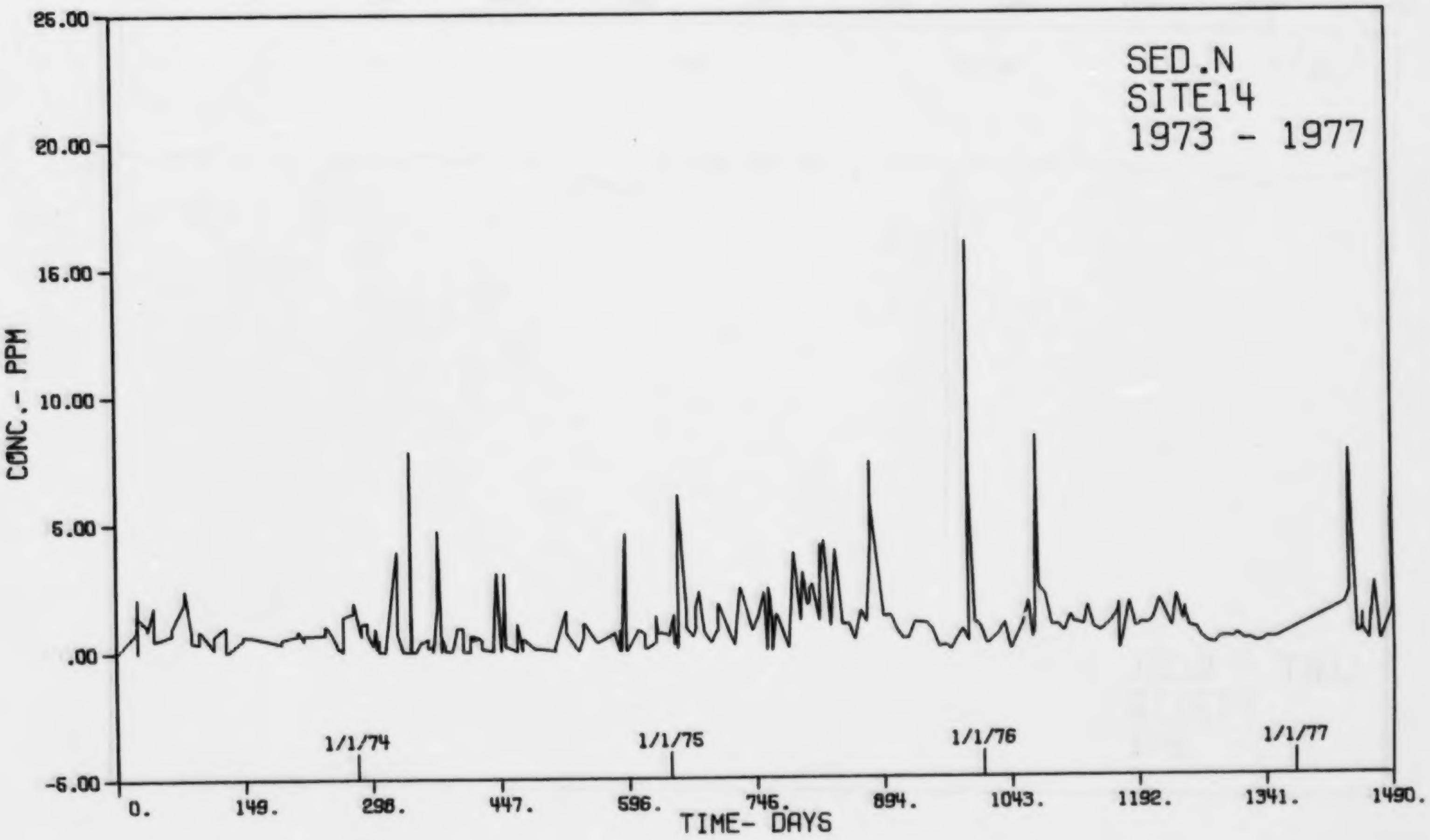

STAGE
SITE14
1973 - 1977
STAGE-FEET
50.00
40.00
30.00
20.00
10.00
.00
-10.00
1/1/74
1/1/75
1/1/76
1/1/77
0.
149.
298.
447.
596.
746.
894.
1043.
1192.
1341.
1490.
TIME- DAYS

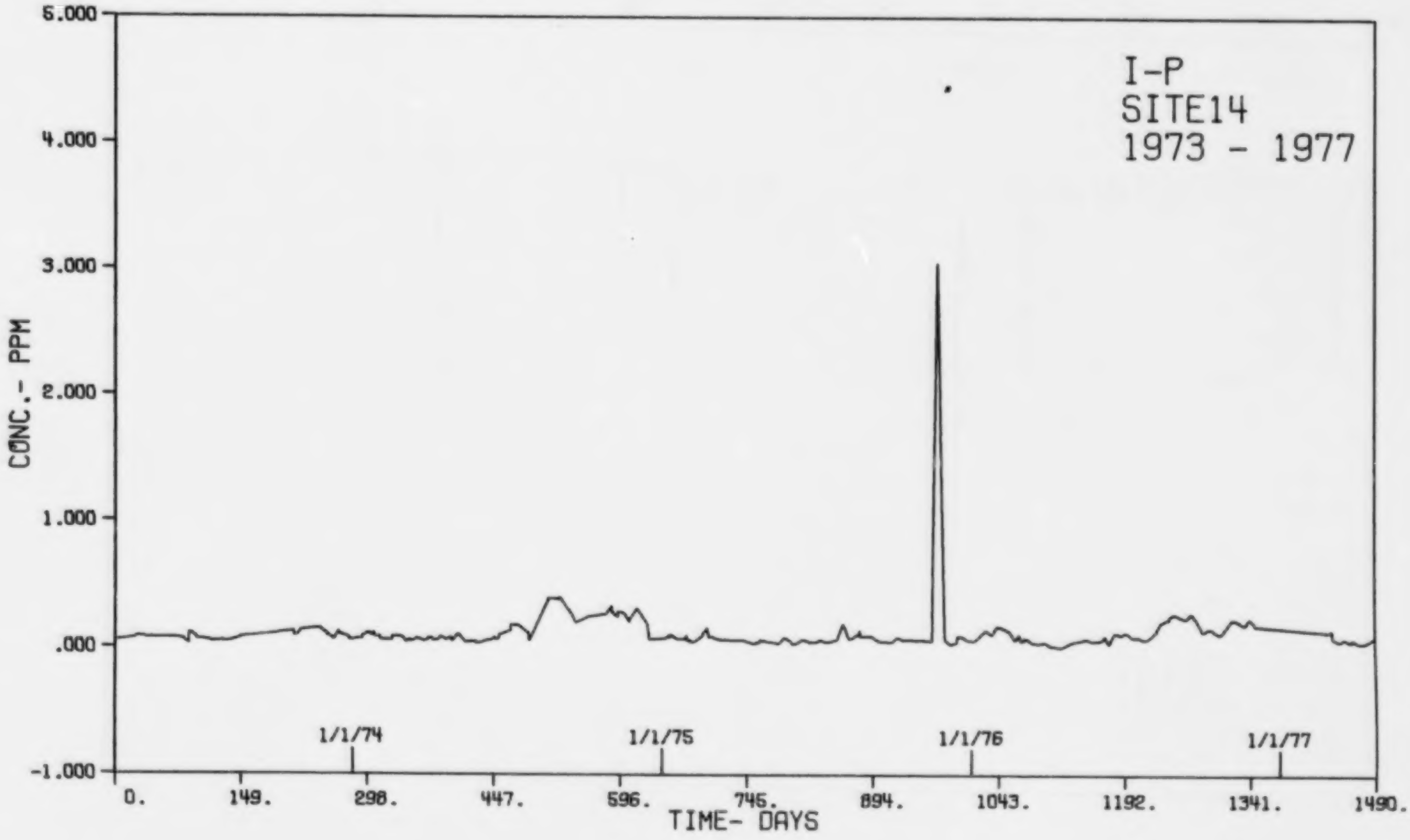

SUS.SOLIDS
SITE14
1973 - 1977
CONC.- PPM
2000.
1500.
1000.
500.
0.
-500.
-1000.
TIME- DAYS
0.
149.
298.
447.
596.
745.
894.
1043.
1192.
1341.
1490.
1/1/74
1/1/75
1/1/76
1/1/77

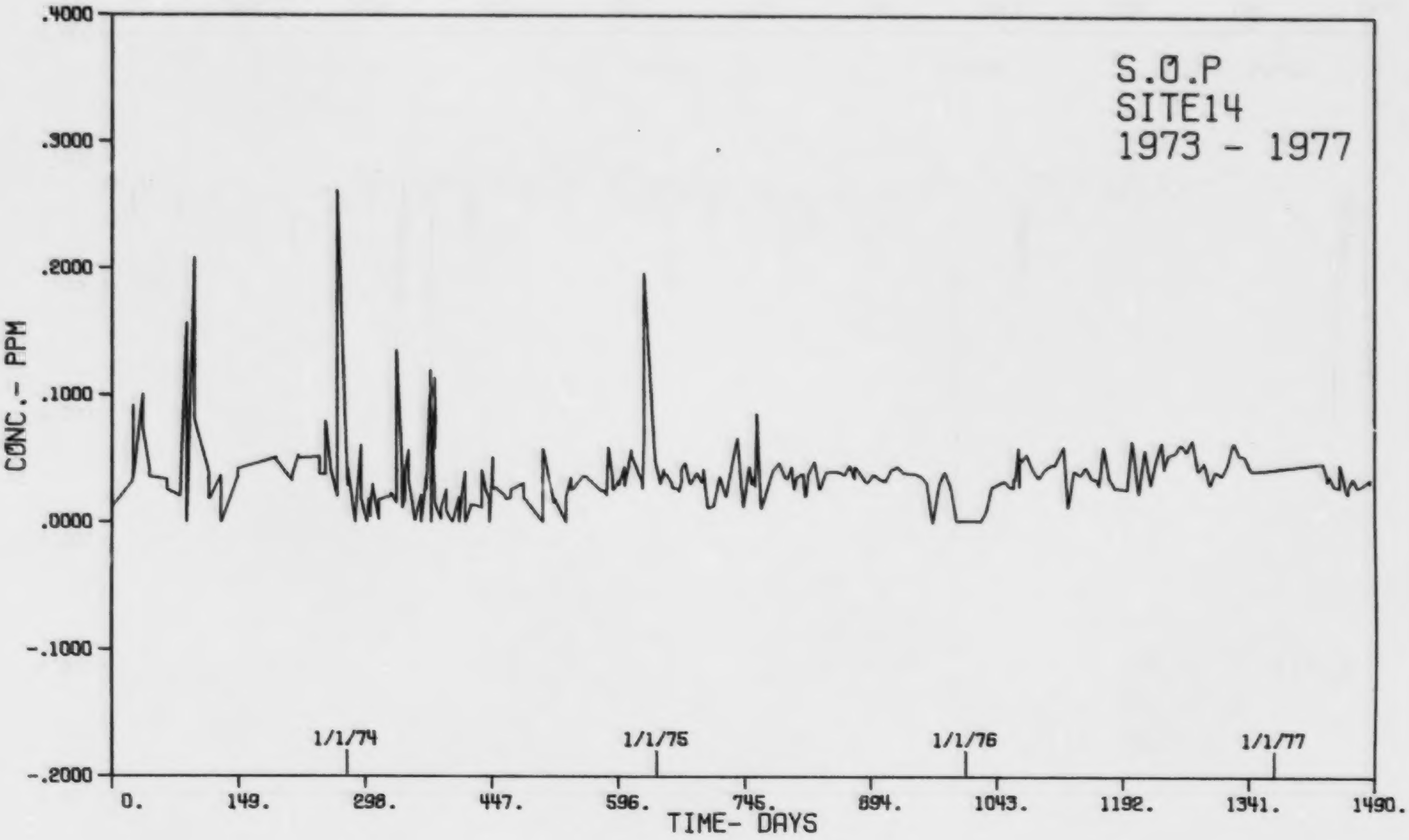

NH4-N
SITE14
1973 - 1977
CONC.- PPM
2.500
2.000
1.500
1.000
.500
.000
-.500
TIME- DAYS
0.
149.
298.
447.
596.
745.
894.
1043.
1192.
1341.
1490.
1/1/74
1/1/75
1/1/76
1/1/77

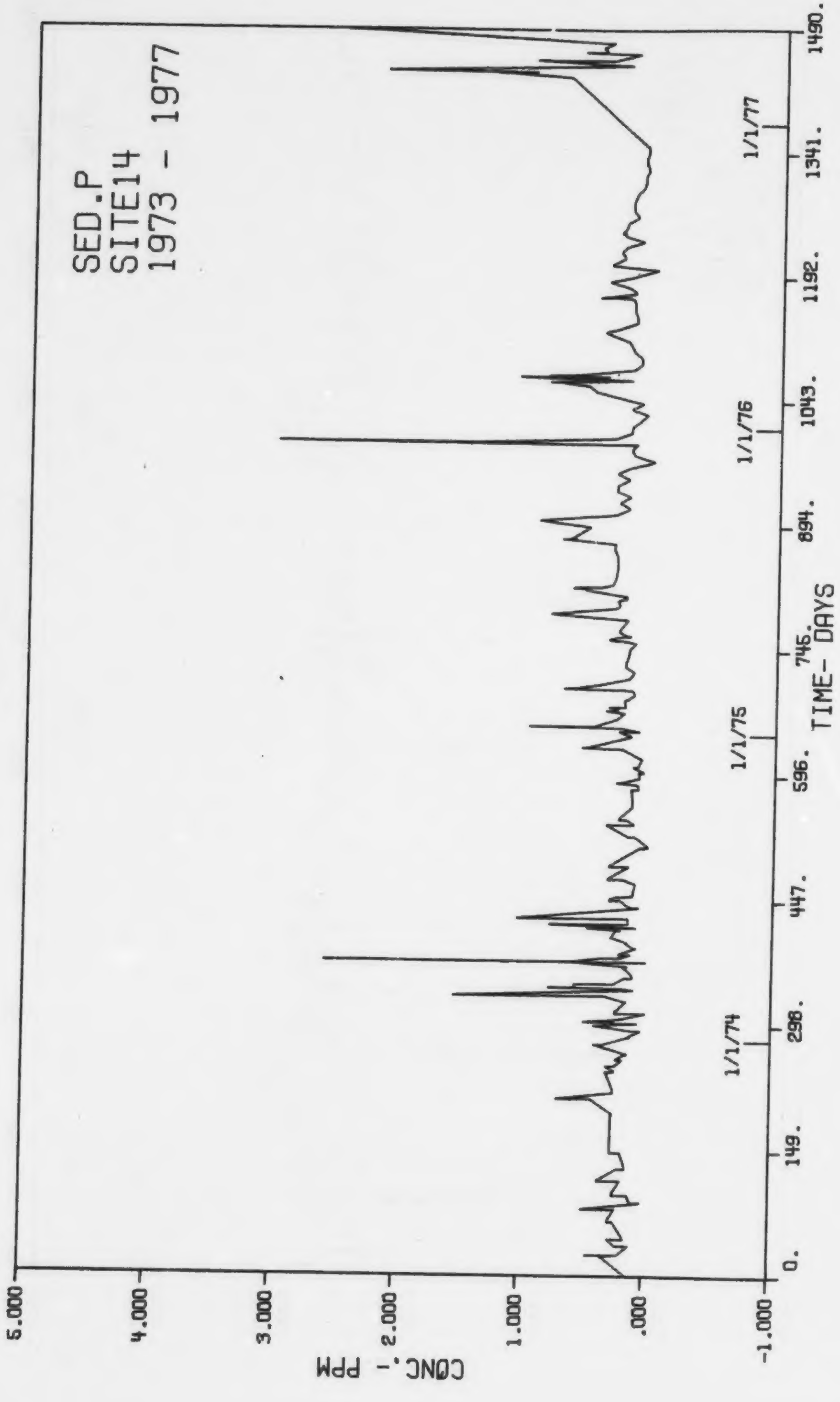

NO3-N
SITE14
1973 - 1977
CONC.- PPM
26.00
20.00
16.00
10.00
5.00
.00
-5.00
1/1/74
1/1/75
1/1/76
1/1/77
0.
149.
298.
447.
596.
746.
894.
1043.
1192.
1341.
1490.
TIME- DAYS

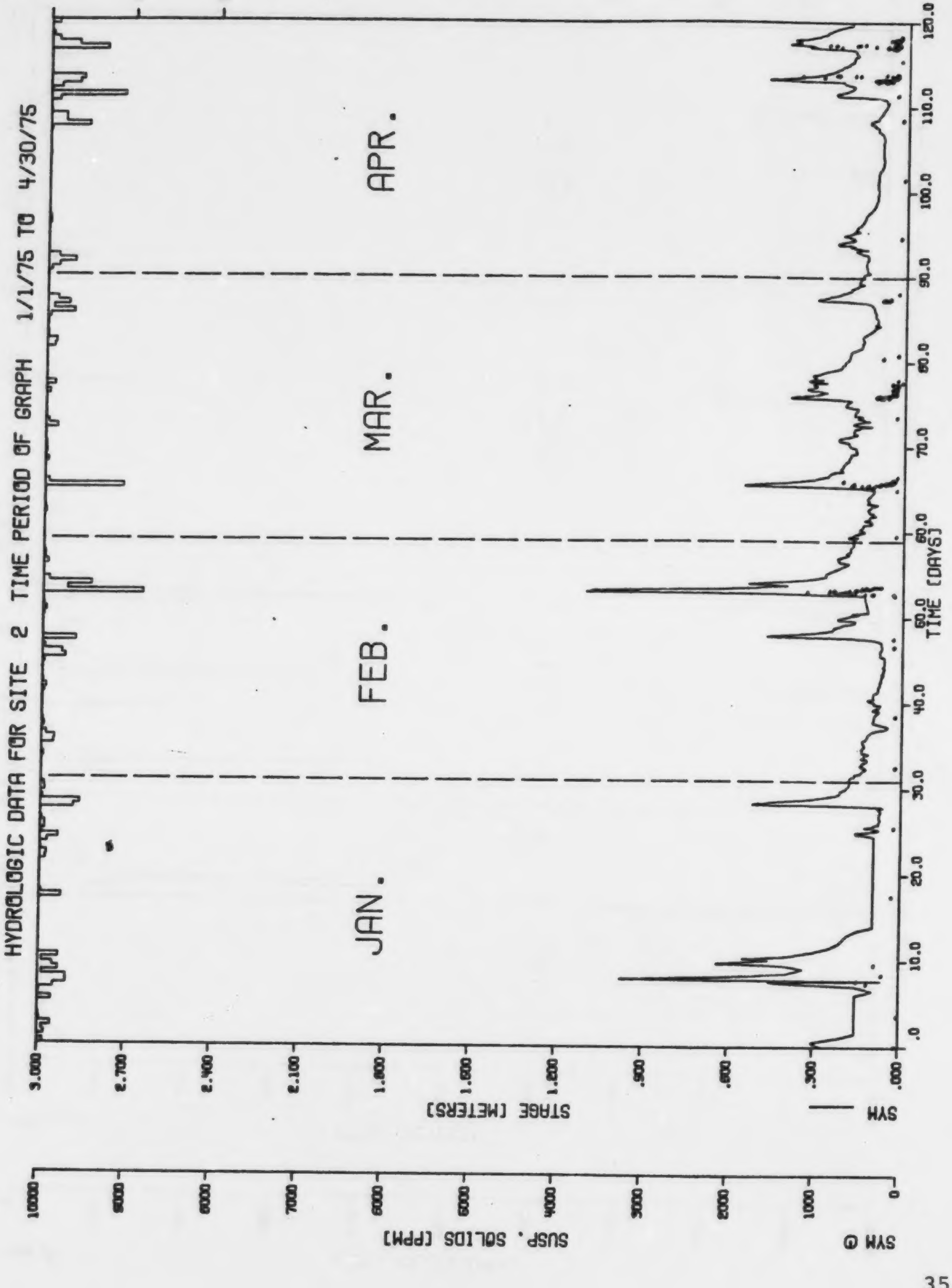

S.0.N
SITE14
1973 - 1977
CONC.- PPM
50.00
40.00
30.00
20.00
10.00
.00
-10.00
TIME- DAYS
0.
149.
298.
447.
596.
745.
894.
1043.
1192.
1341.
1490.
1/1/74
1/1/75
1/1/76
1/1/77

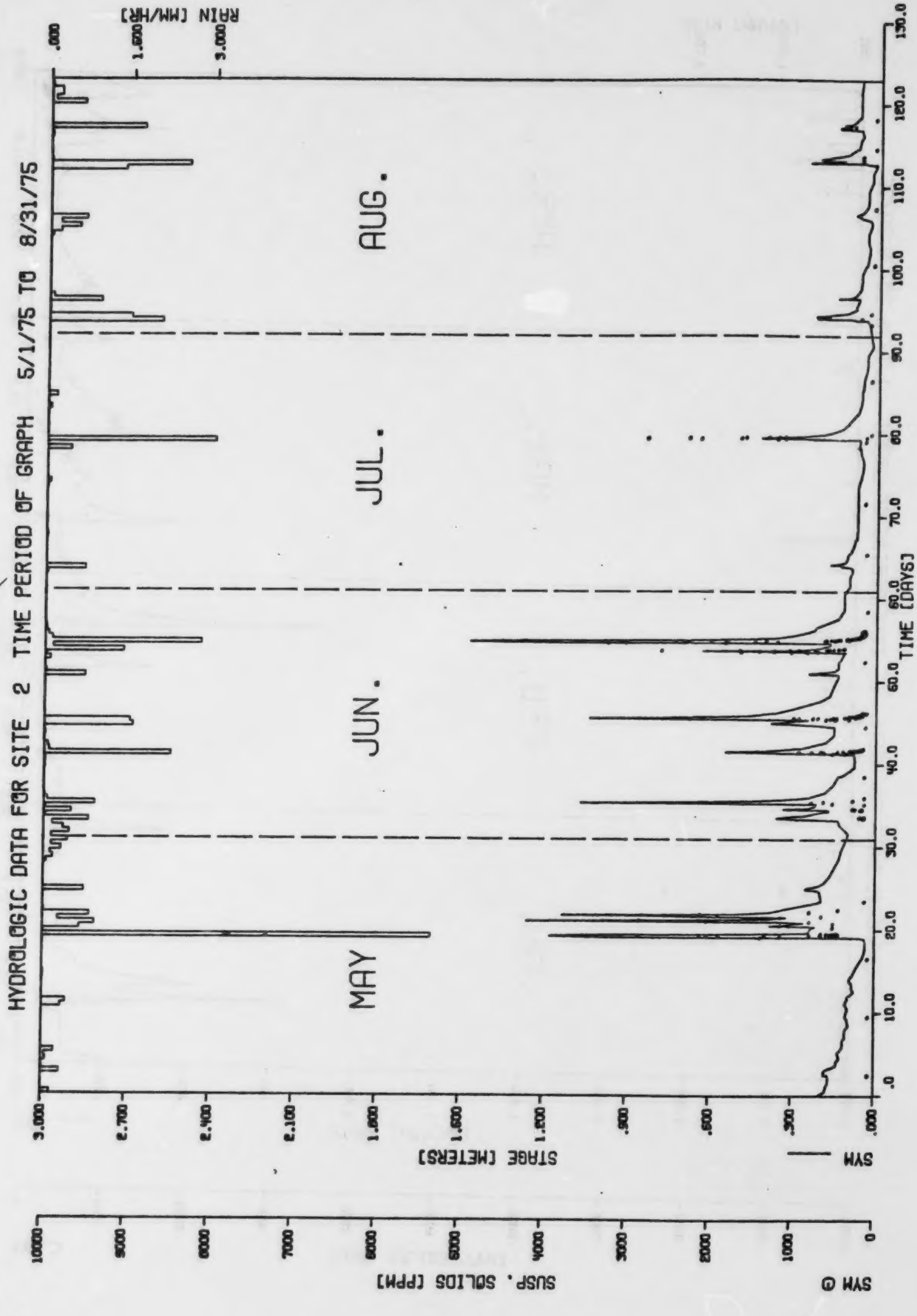
SED.N
SITE14
1973 - 1977
CONC.- PPM
25.00
20.00
15.00
10.00
5.00
.00
-5.00
1/1/74
1/1/75
1/1/76
1/1/77
0.
149.
298.
447.
596.
745.
894.
1043.
1192.
1341.
1490.
TIME- DAYS


I-P
SITE14
1973 - 1977
CONC.- PPM
5.000
4.000
3.000
2.000
1.000
.000
-1.000
1/1/74
1/1/75
1/1/76
1/1/77
0.
149.
298.
447.
596.
746.
894.
1043.
1192.
1341.
1490.
TIME- DAYS

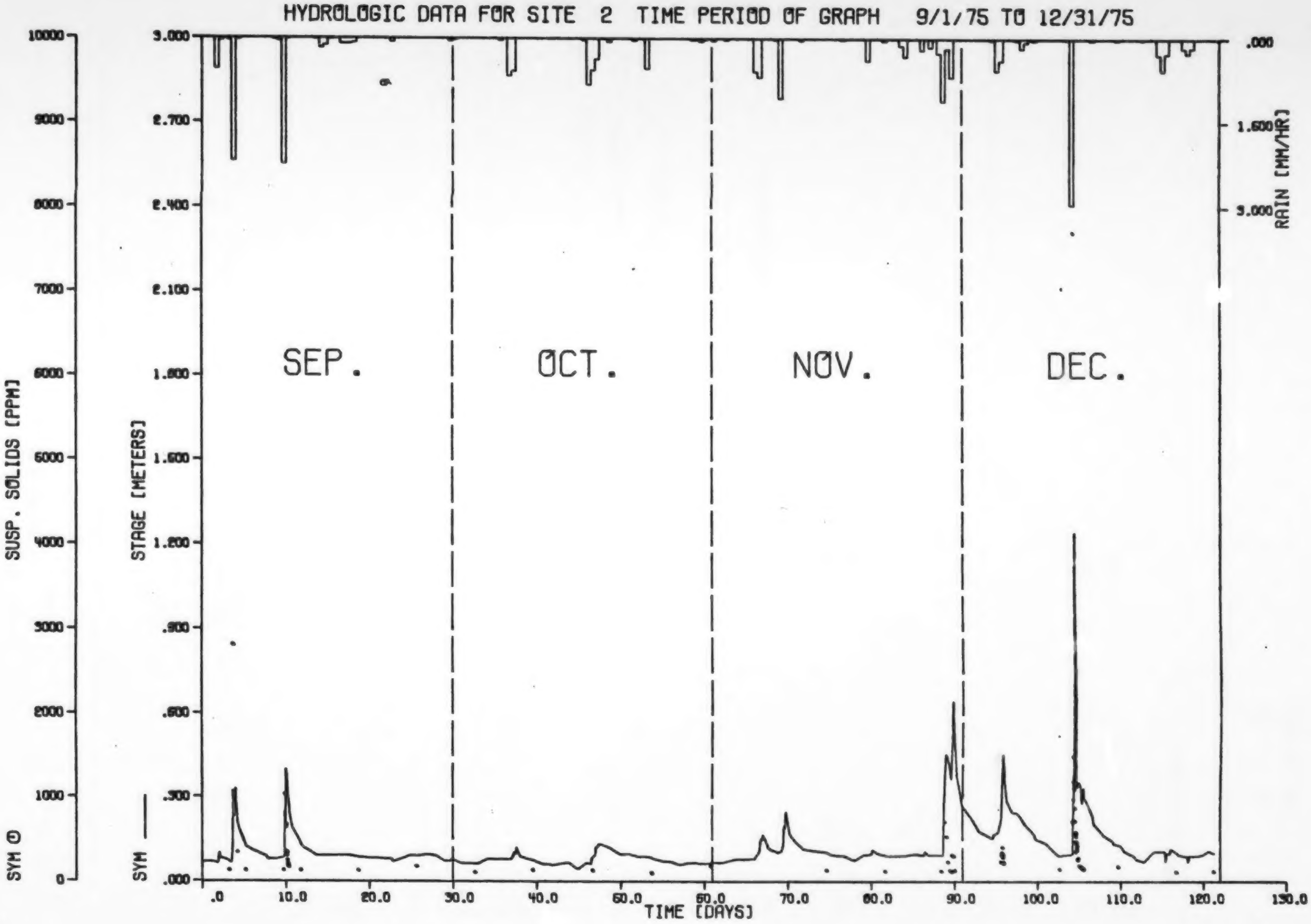

S.O.P
SITE14
1973 - 1977
CONC.- PPM
.4000
.3000
.2000
.1000
.0000
-.1000
-.2000
1/1/74
1/1/75
1/1/76
1/1/77
0.
149.
298.
447.
596.
745.
894.
1043.
1192.
1341.
1490.
TIME- DAYS


SED.P
SITE14
1973 - 1977
CONC.- PPM
5.000
4.000
3.000
2.000
1.000
.000
-1.000
TIME- DAYS
0.
149.
298.
447.
596.
745.
894.
1043.
1192.
1341.
1490.
1/1/74
1/1/75
1/1/76
1/1/77

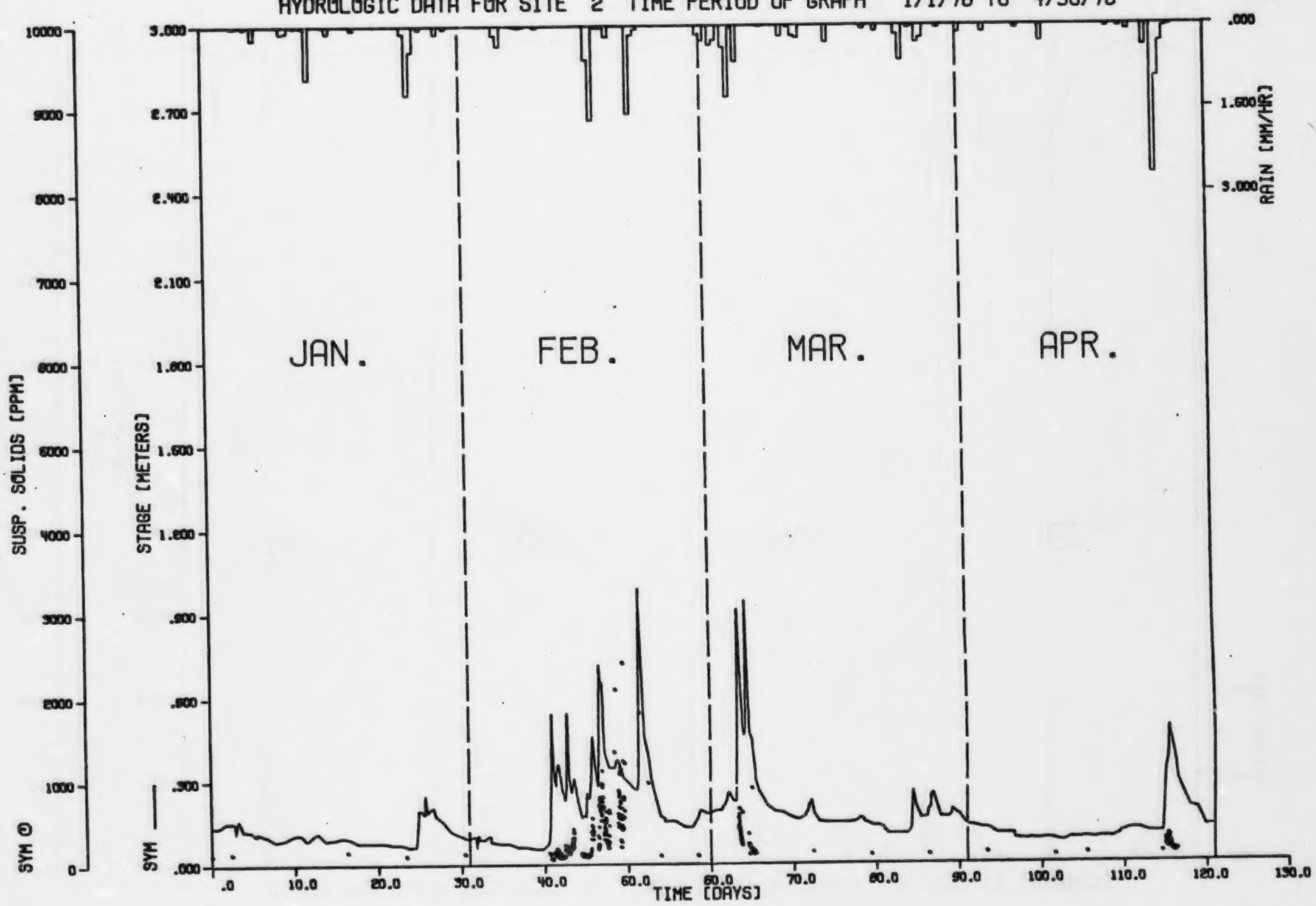

HYDROLOGIC DATA FOR SITE 2 TIME PERIOD OF GRAPH 1/1/75 TO 4/30/75
JAN.
FEB.
MAR.
APR.
RAIN (MM/HR)
.000
1.500
3.000
STAGE (METERS)
SYM —
3.000
2.700
2.400
2.100
1.800
1.500
1.200
.900
.600
.300
.000
SUSP. SOLIDS (PPM)
SYM ⊙
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
TIME (DAYS)
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0
120.0

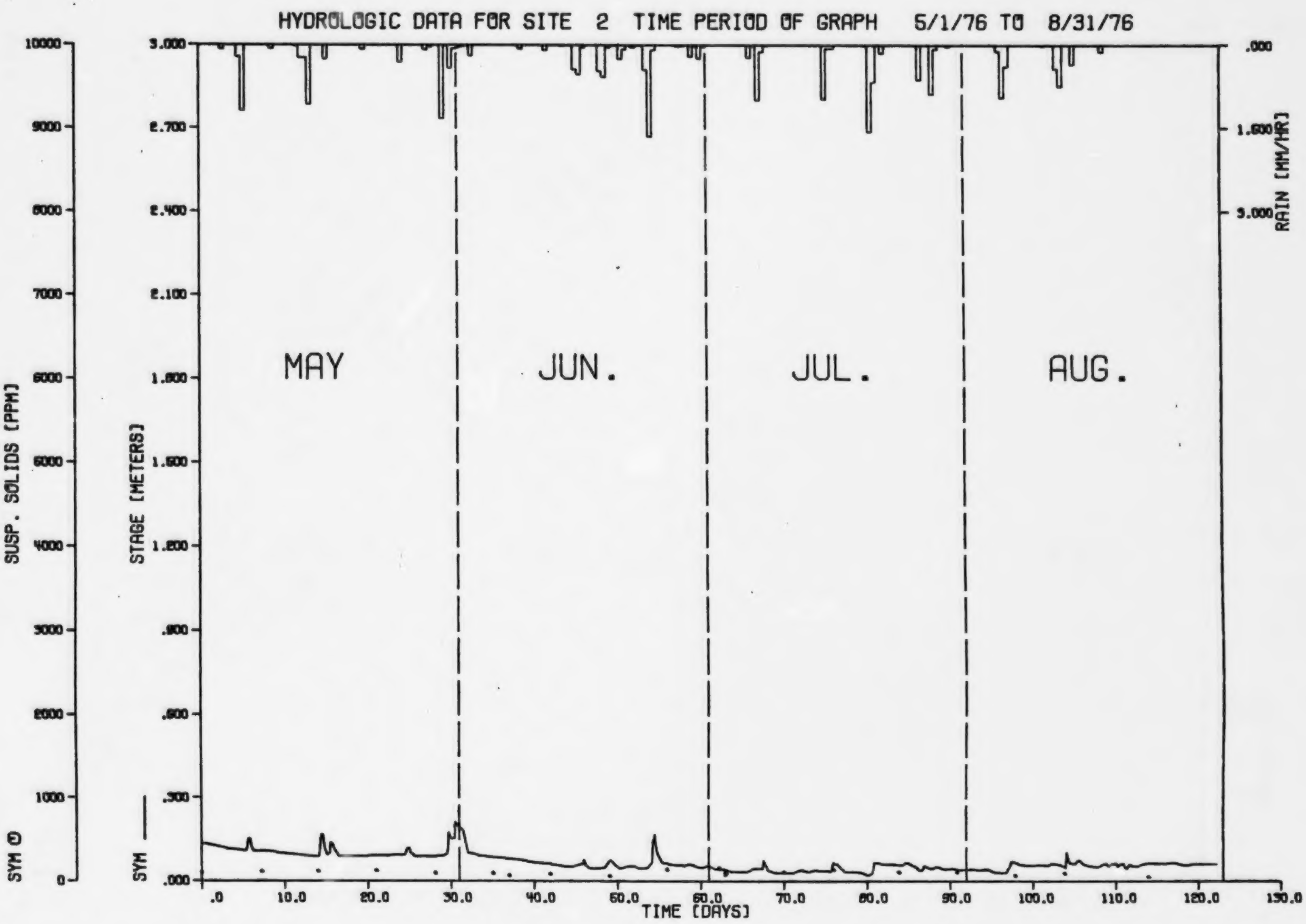


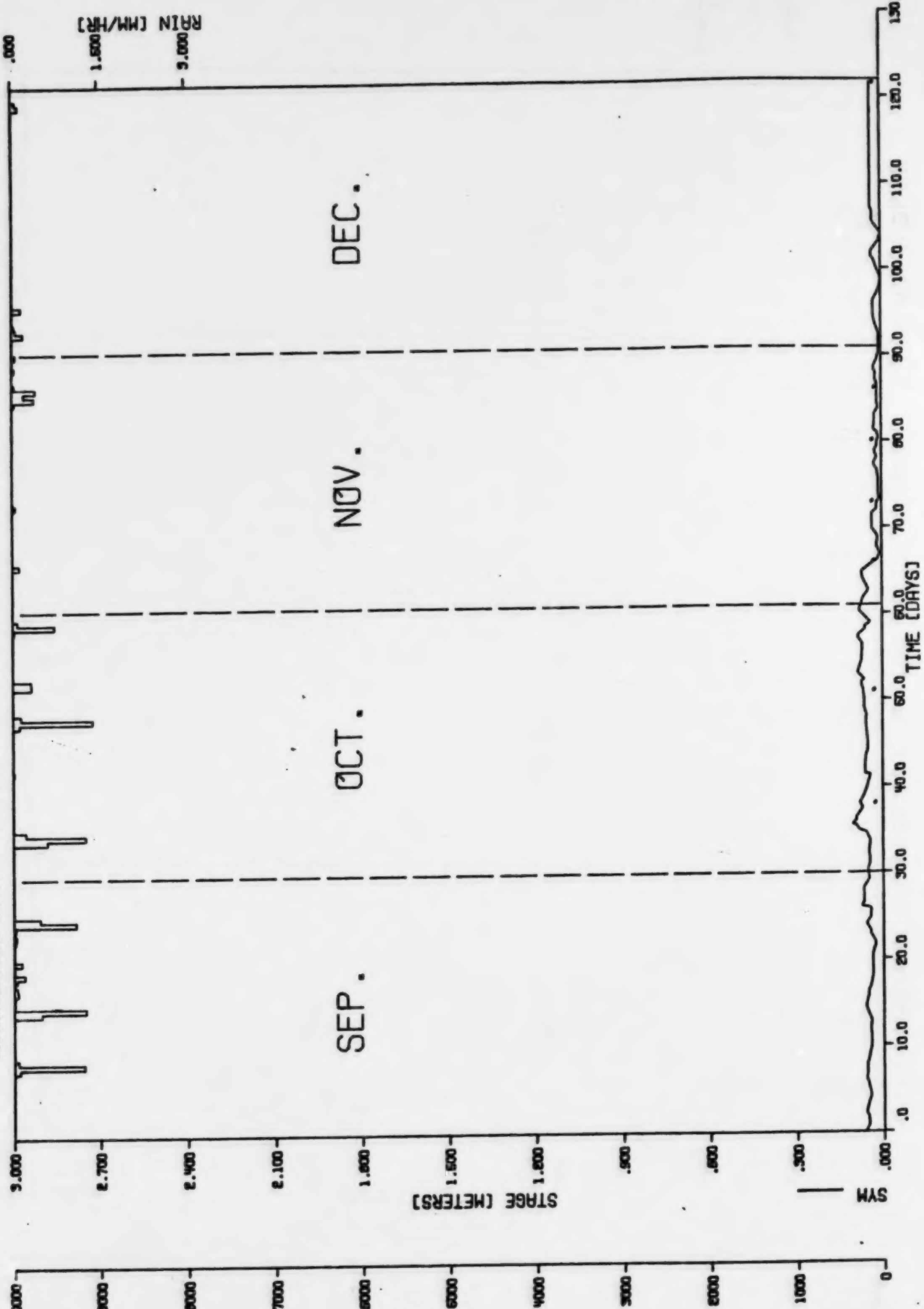
HYDROLOGIC DATA FOR SITE 2 TIME PERIOD OF GRAPH 5/1/75 TO 8/31/75


HYDROLOGIC DATA FOR SITE 2 TIME PERIOD OF GRAPH 9/1/75 TO 12/31/75
SUSP. SOLIDS [PPM]
SYM ⊙
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
STAGE [METERS]
SYM —
3.000
2.700
2.400
2.100
1.800
1.500
1.200
.900
.600
.300
.000
RAIN [MM/HR]
.000
1.500
3.000
SEP.
OCT.
NOV.
DEC.
TIME [DAYS]
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0
120.0
130.0

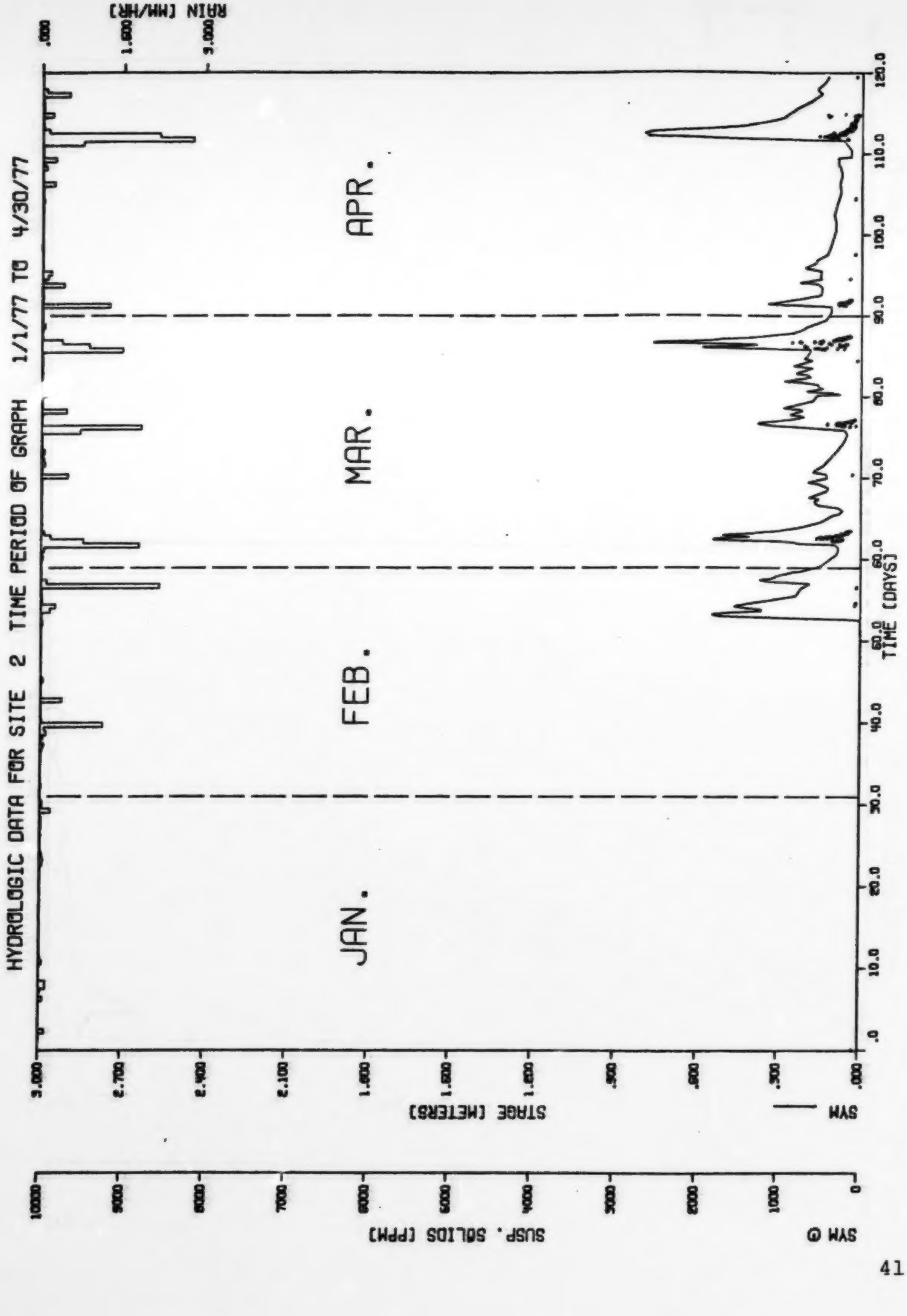
HYDROLOGIC DATA FOR SITE 2 TIME PERIOD OF GRAPH 1/1/76 TO 4/30/76



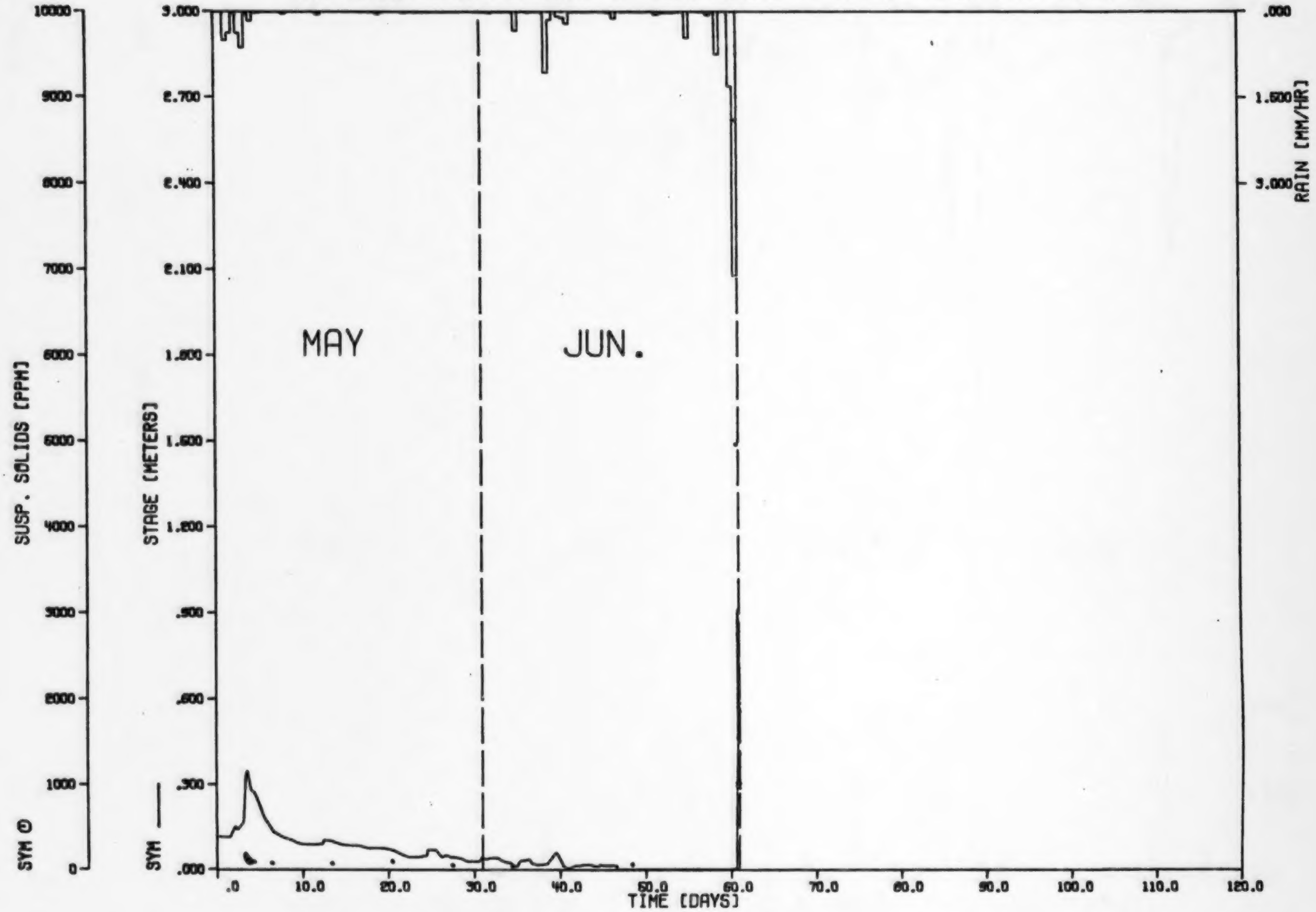

HYDROLOGIC DATA FOR SITE 2 TIME PERIOD OF GRAPH 5/1/76 TO 8/31/76
SUSP. SOLIDS [PPM]
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
SYM ⊙
STAGE [METERS]
3.000
2.700
2.400
2.100
1.800
1.500
1.200
.900
.600
.300
.000
SYM ——
RAIN [MM/HR]
.000
1.500
3.000
MAY
JUN.
JUL.
AUG.
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0
120.0
130.0
TIME [DAYS]

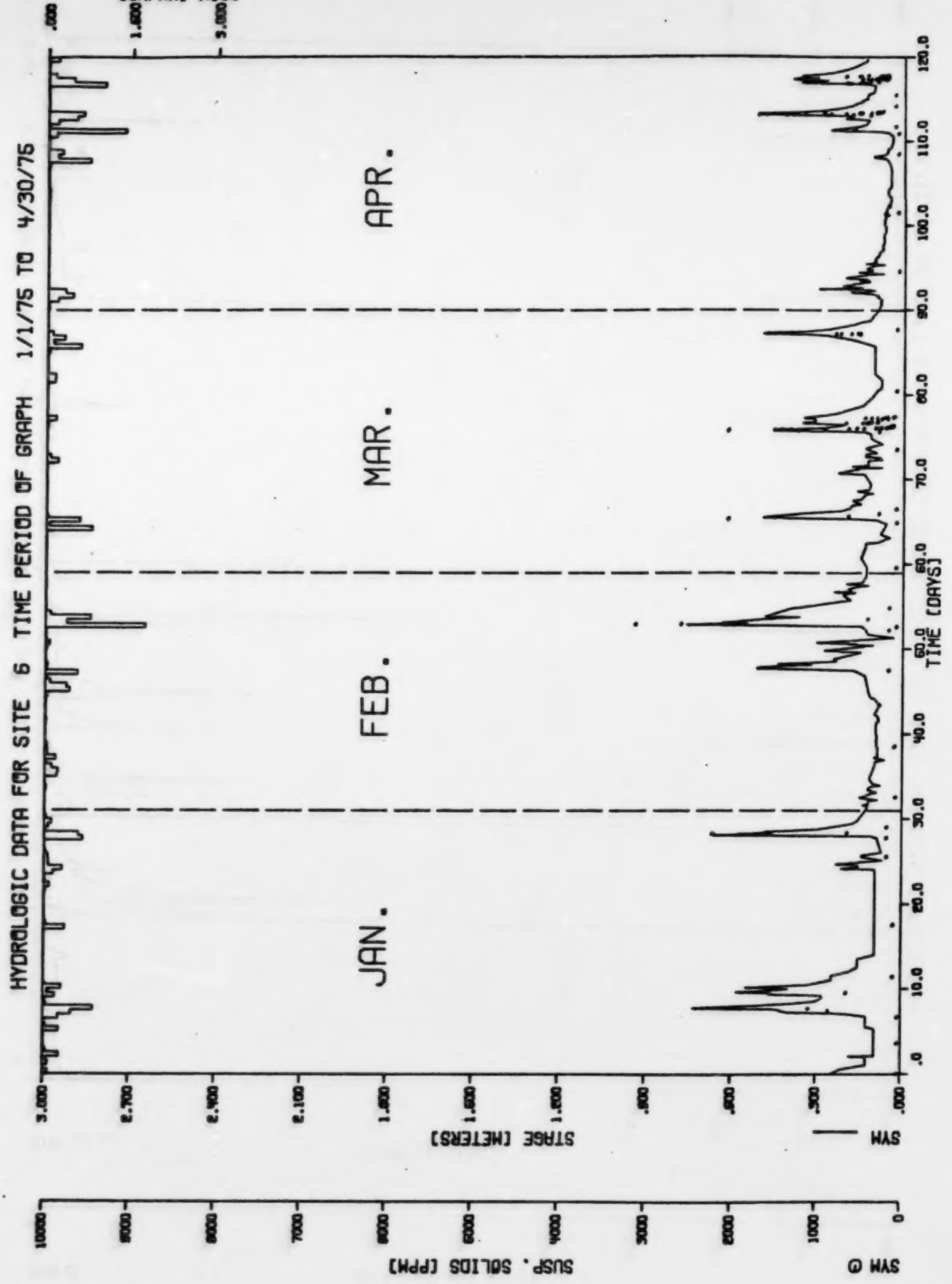


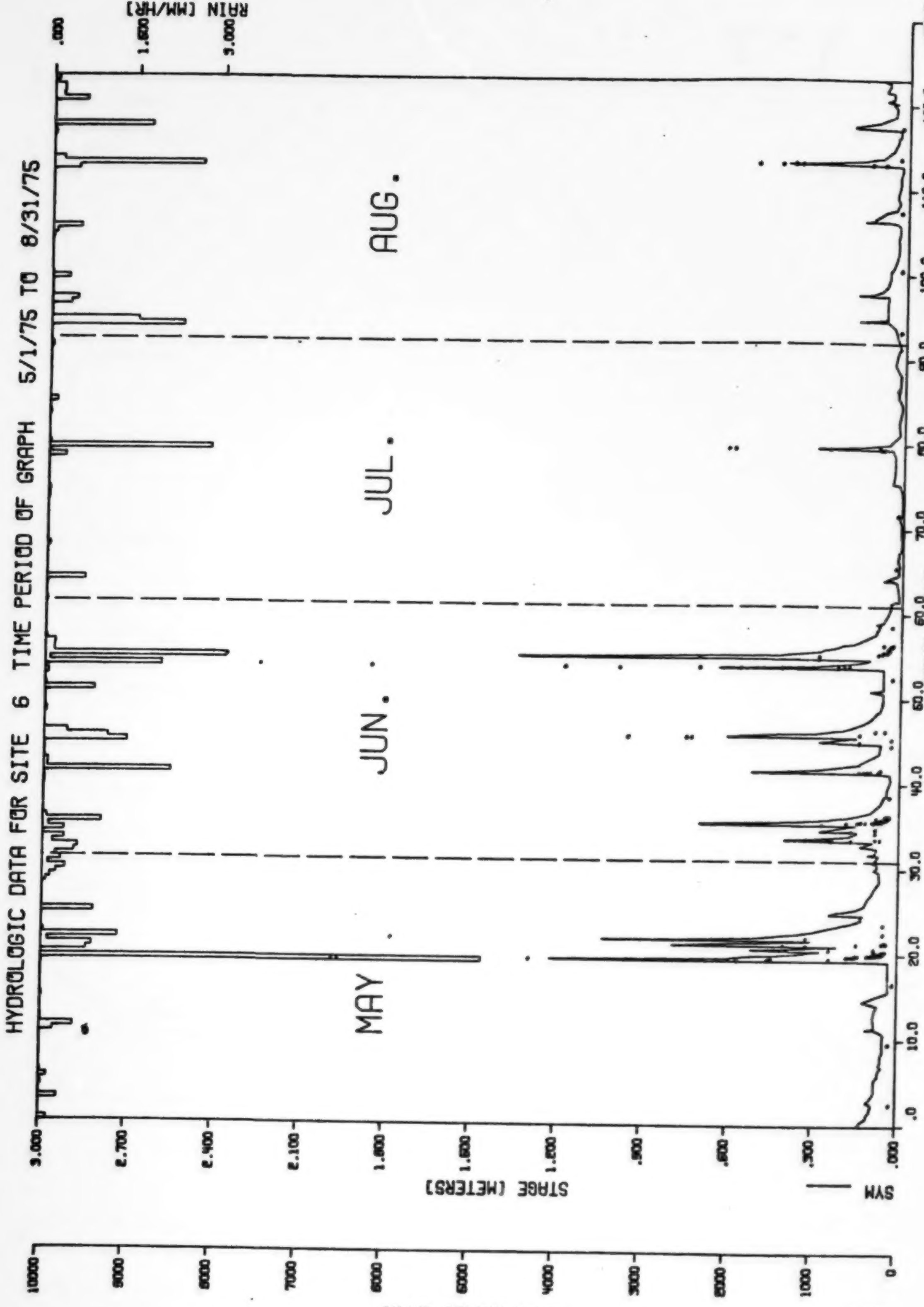
HYDROLOGIC DATA FOR SITE 2 TIME PERIOD OF GRAPH 9/1/76 TO 12/31/76

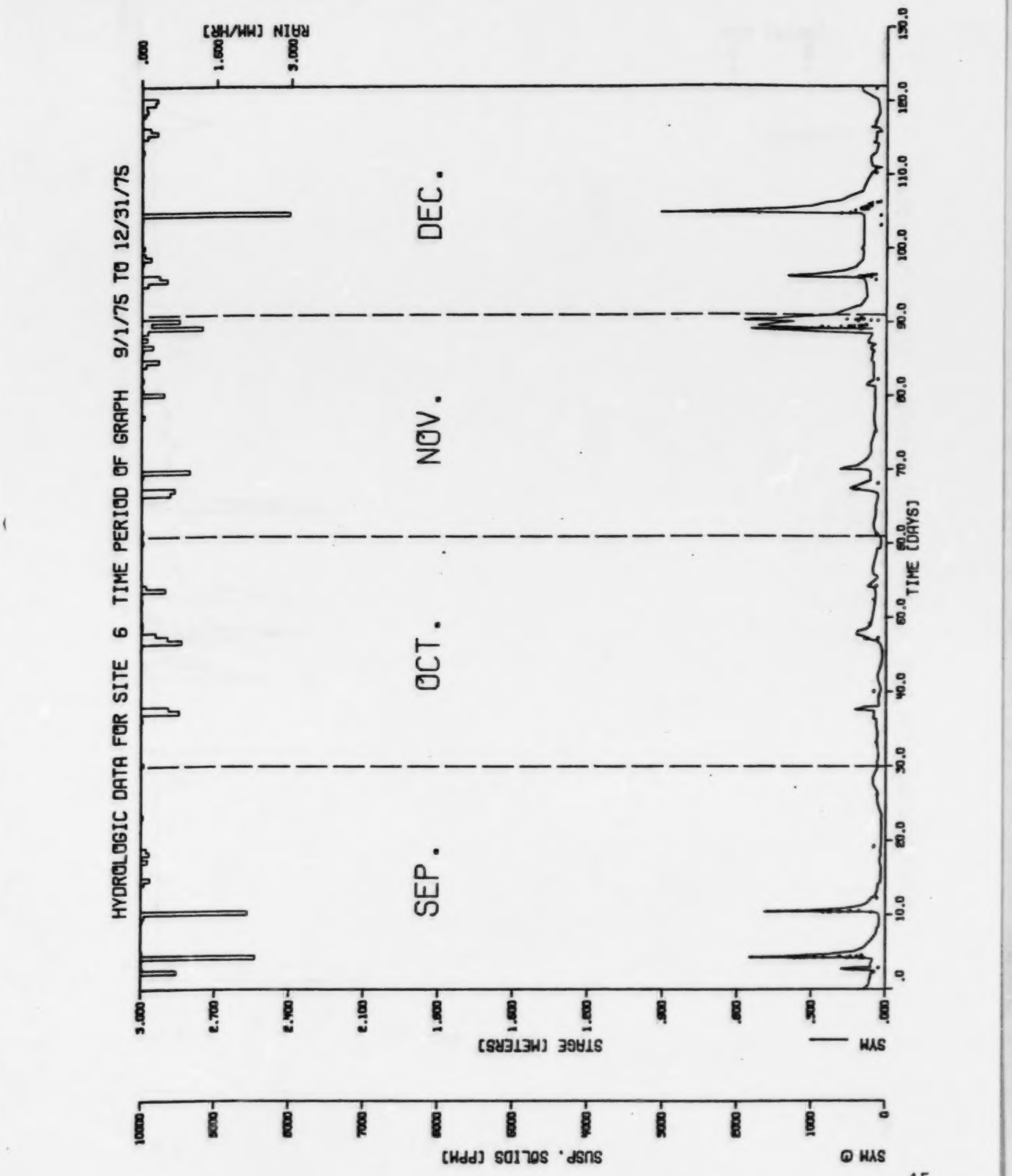

HYDROLOGIC DATA FOR SITE 2 TIME PERIOD OF GRAPH 1/1/77 TO 4/30/77
RAIN (MM/HR)
.000
1.500
3.000
STAGE (METERS)
3.000
2.700
2.400
2.100
1.800
1.500
1.200
.900
.600
.300
.000
SYM —
SUSP. SOLIDS (PPM)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
SYM ⊙
TIME (DAYS)
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0
120.0
JAN.
FEB.
MAR.
APR.

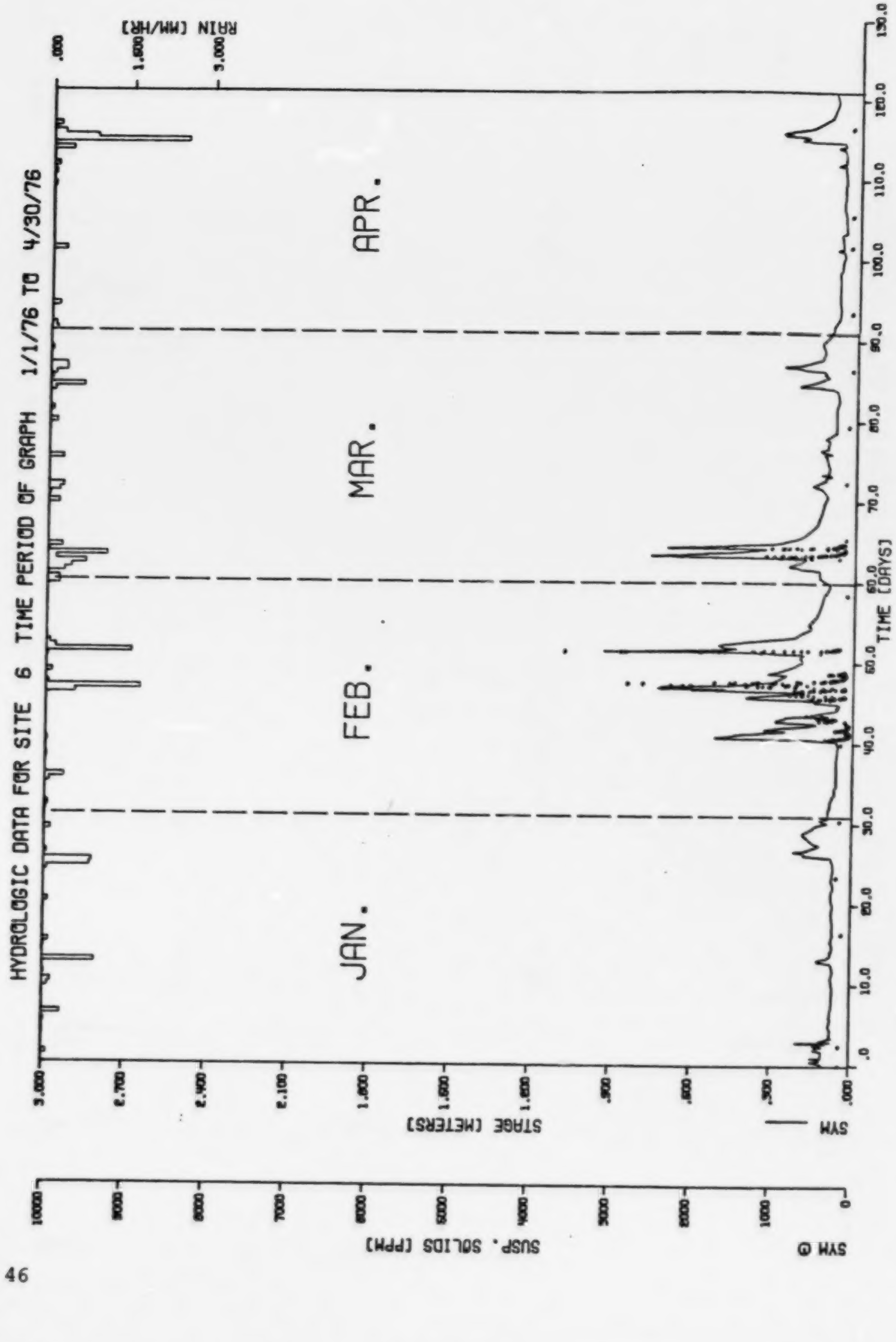
HYDROLOGIC DATA FOR SITE 2 TIME PERIOD OF GRAPH 5/1/77 TO 6/30/77

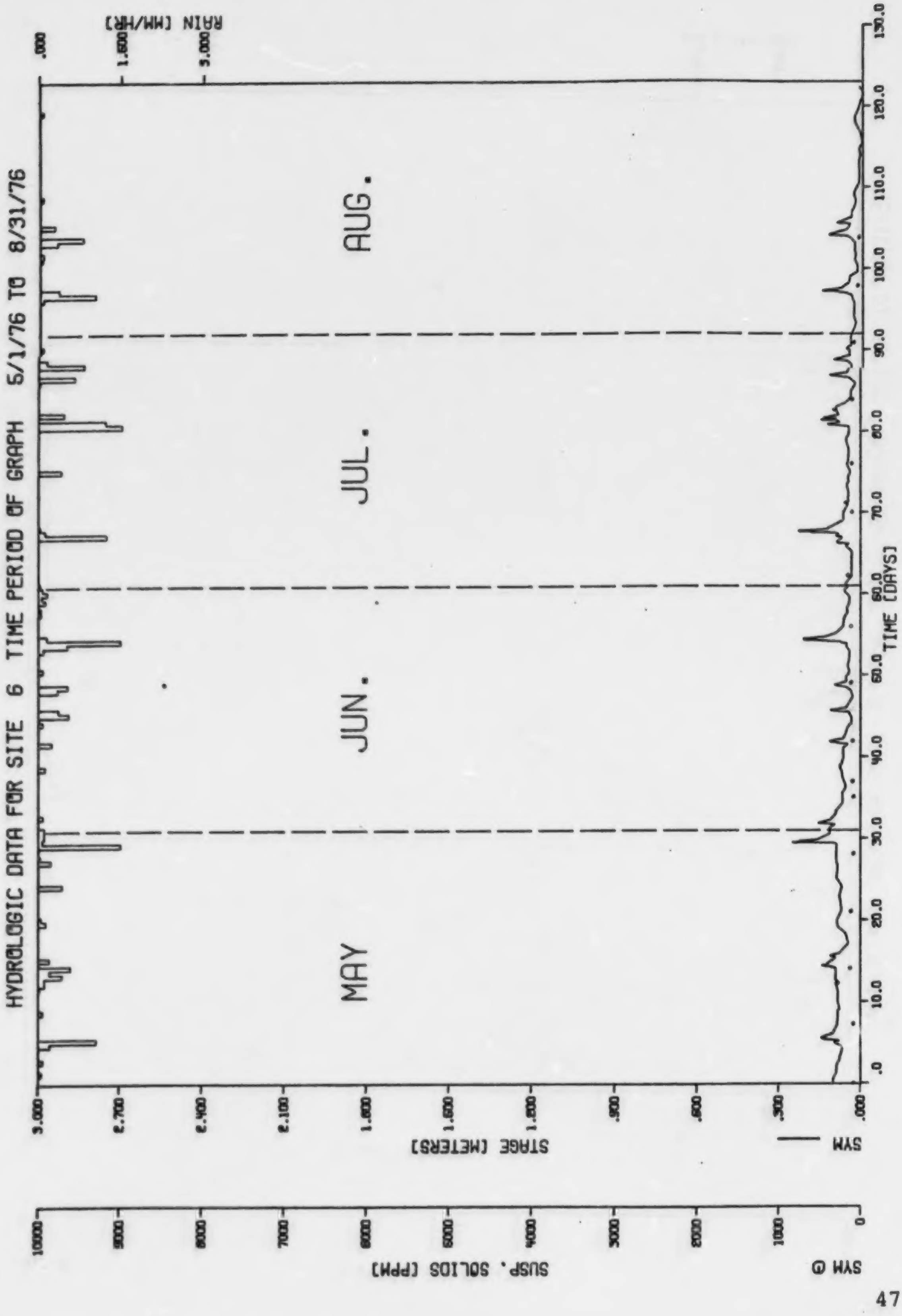



HYDROLOGIC DATA FOR SITE 6 TIME PERIOD OF GRAPH 1/1/75 TO 4/30/75
RAIN (MM/HR)
.000
1.500
3.000
JAN.
FEB.
MAR.
APR.
TIME (DAYS)
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0
120.0
STAGE (METERS)
SYM —
.000
.300
.600
.900
1.200
1.500
1.800
2.100
2.400
2.700
3.000
SUSP. SOLIDS (PPM)
SYM ⊙
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000

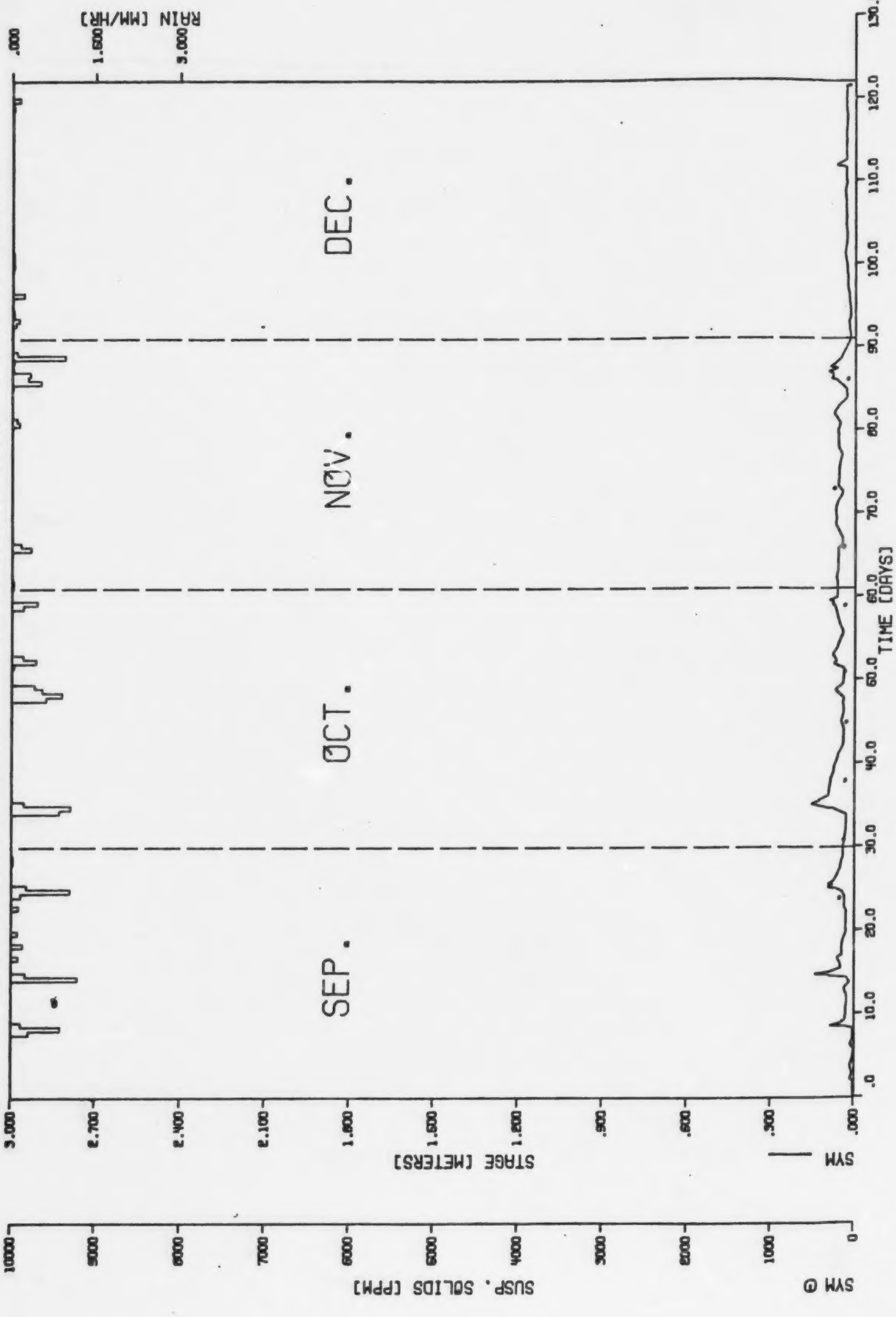

HYDROLOGIC DATA FOR SITE 6 TIME PERIOD OF GRAPH 5/1/75 TO 8/31/75
RAIN (MM/HR)
.000
1.500
3.000
STAGE (METERS)
3.000
2.700
2.400
2.100
1.800
1.500
1.200
.900
.600
.300
.000
SYM —
SUSP. SOLIDS (PPM)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
SYM ⊙
TIME (DAYS)
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0
120.0
130.0
MAY
JUN.
JUL.
AUG.

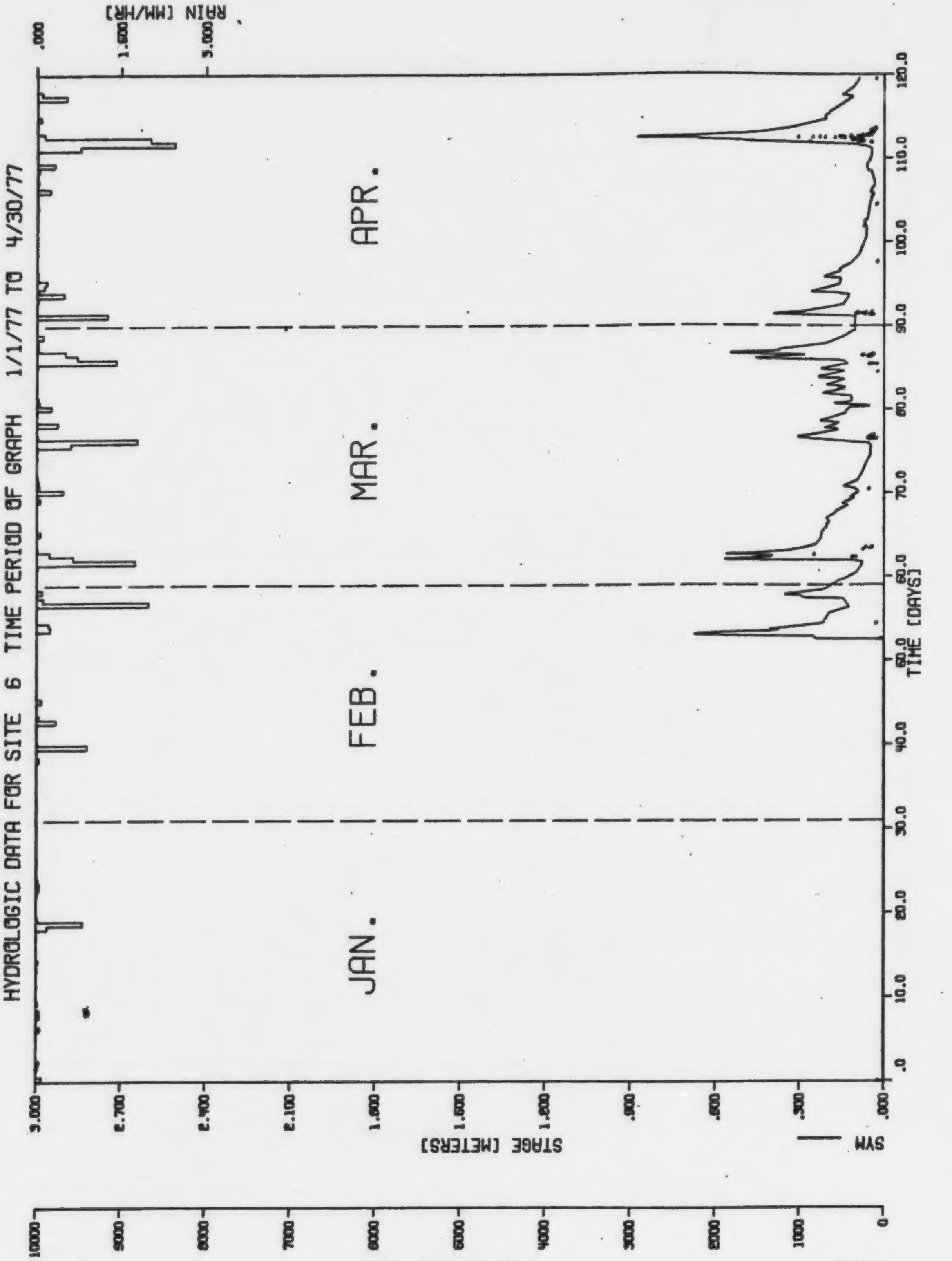

HYDROLOGIC DATA FOR SITE 6 TIME PERIOD OF GRAPH 9/1/75 TO 12/31/75
SEP.
OCT.
NOV.
DEC.
RAIN (MM/HR)
.000
1.500
3.000
STAGE (METERS)
3.000
2.700
2.400
2.100
1.800
1.500
1.200
.900
.600
.300
.000
SYM —
SUSP. SOLIDS (PPM)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
SYM ⊙
TIME (DAYS)
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0
120.0
130.0


HYDROLOGIC DATA FOR SITE 6 TIME PERIOD OF GRAPH 1/1/76 TO 4/30/76
RAIN (MM/HR)
.000
1.500
3.000
STAGE (METERS)
3.000
2.700
2.400
2.100
1.800
1.500
1.200
.900
.600
.300
.000
SYM —
SUSP. SOLIDS (PPM)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
SYM ⊙
TIME (DAYS)
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0
120.0
130.0
JAN.
FEB.
MAR.
APR.


HYDROLOGIC DATA FOR SITE 6 TIME PERIOD OF GRAPH 5/1/76 TO 8/31/76
RAIN (MM/HR)
.000
1.500
3.000
MAY
JUN.
JUL.
AUG.
TIME (DAYS)
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0
120.0
130.0
STAGE (METERS)
SYM —
3.000
2.700
2.400
2.100
1.800
1.500
1.200
.900
.600
.300
.000
SUSP. SOLIDS (PPM)
SYM ⊙
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0

HYDROLOGIC DATA FOR SITE 6 TIME PERIOD OF GRAPH 9/1/76 TO 12/31/76




HYDROLOGIC DATA FOR SITE 6 TIME PERIOD OF GRAPH 1/1/77 TO 4/30/77
RAIN [MM/HR]
.000
1.500
3.000
STAGE [METERS]
3.000
2.700
2.400
2.100
1.800
1.500
1.200
.900
.600
.300
.000
SYM —
SUSP. SOLIDS [PPM]
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
SYM ⊙
TIME [DAYS]
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
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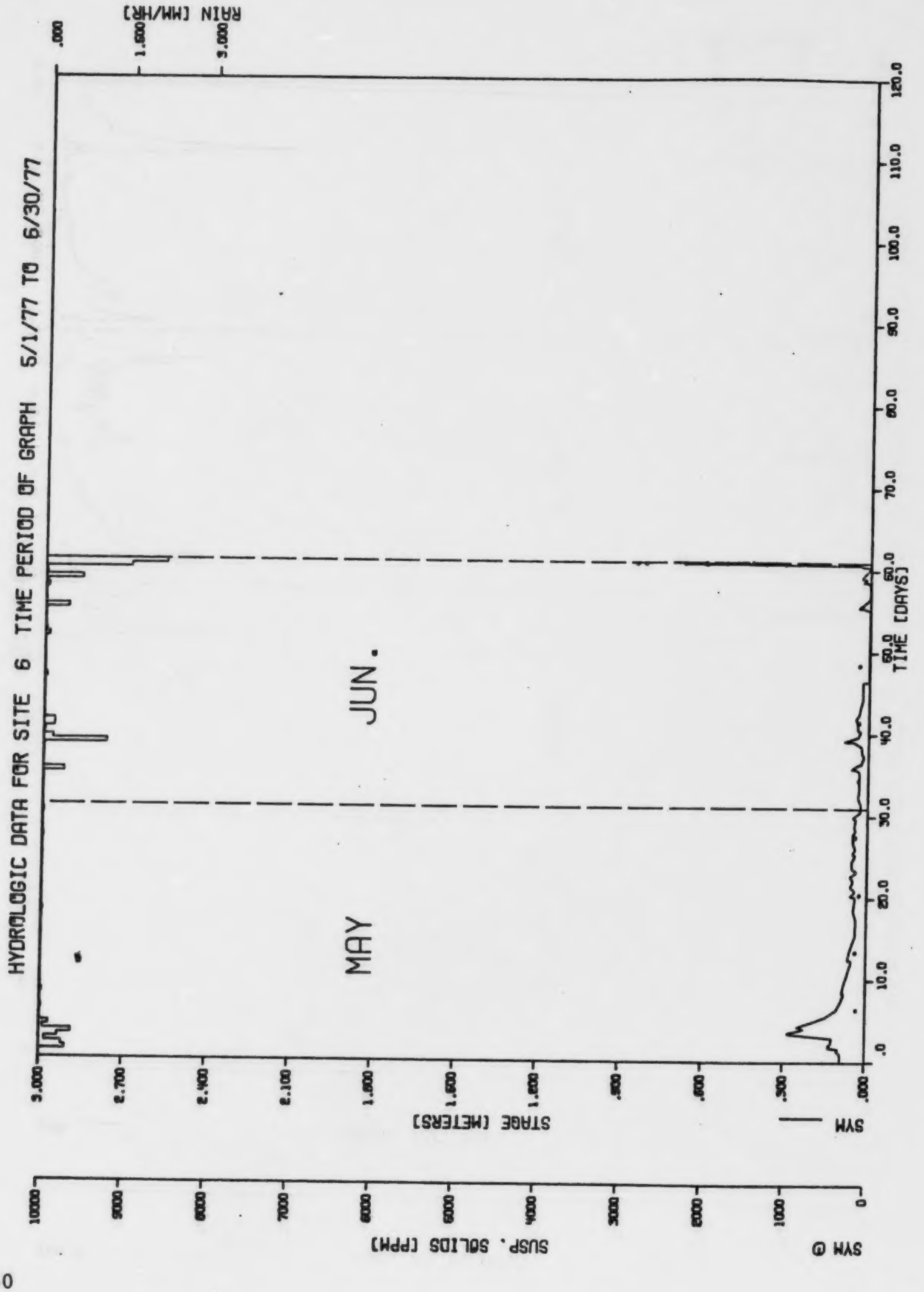
120.0
JAN.
FEB.
MAR.
APR.


HYDROLOGIC DATA FOR SITE 6 TIME PERIOD OF GRAPH 5/1/77 TO 6/30/77
RAIN (MM/HR)
.000
1.500
3.000
TIME (DAYS)
.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
110.0
120.0
MAY
JUN.
STAGE (METERS)
3.000
2.700
2.400
2.100
1.800
1.500
1.200
.900
.600
.300
.000
SYM —
SUSP. SOLIDS (PPM)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
SYM ⊙

UNIVERSITY OF ILLINOIS
WATER QUALITY DATA

The following tables are of parameters of water quality based on grab samples collected at University of Illinois stations. Stations are listed in Volume II. The columns of the following pages contain the following information:

First Column	Date
Second Column	Time
Third Column	Station Number
Fourth Column	Total Alkalinity (mg/l)
Fifth Column	Specific Conductance (mg/l)
Sixth Column	Total Dissolved Ionized Solids (mg/l)
Seventh Column	Hardness (mg/l)
Eighth Column	Turbidity (Jackson Turbidity Units)
Ninth Column	Total Phosphorus (mg/l)
Tenth Column	Soluble Phosphorus (mg/l)
Eleventh Column	Total Nitrate (mg/l)
Twelfth Column	Total Nitrate (mg/l)
Thirteenth Column	Ammonium (mg/l)
Fourteenth Column	Organic Nitrogen (mg/l)
Fifteenth Column	Suspended Solids (mg/l) (8 Feb., 1975-15 May, 1976 and 4 Oct., 1977-4 Oct., 1977) Total Residue (mg/l) (28 May, 1976-16 Sept., 1977)
Sixteenth Column	Sulfate (mg/l)

Data files are available, at cost, in machine readable form. For information, contact:

Dr. James R. Karr
Department of Ecology, Ethology and Evolution
University of Illinois
Healy and Wright Streets
Champaign, IL 61820

```
75FEB08   12
  750208        0186    0    0    0    0    0  .000  .036  6.23  .00 1.09  .00    98  0.0
  750208        0183    0    0    0    0    0  .000  .031  7.45  .00  .27  .00    60  0.0
  750208        0181    0    0    0    0    0  .000  .040  6.14  .00 1.09  .00    20  0.0
  750208        0179    0    0    0    0    0  .000  .037  6.14  .00  .45  .00    33  0.0
  750208        0178    0    0    0    0    0  .000  .116  6.00  .00  .36  .00    24  0.0
  750208        0177    0    0    0    0    0  .000  .034  5.77  .00  .27  .00    55  0.0
  750208        0176    0    0    0    0    0  .000  .032  5.32  .00  .36  .00    34  0.0
  750208        0175    0    0    0    0    0  .000  .033  5.32  .00  .36  .00    36  0.0
  750208        0174    0    0    0    0    0  .000  .048  4.68  .00  .23  .00    56  0.0
  750208        0173    0    0    0    0    0  .000  .036  5.32  .00  .27  .00    81  0.0
  750208        0172    0    0    0    0    0  .000  .036  5.05  .00  .32  .00    48  0.0
  750208        0171    0    0    0    0    0  .000  .042  5.09  .00  .45  .00    75  0.0
75MAR23   12
  750323        0186    0    0    0    0    0  .000  .026  5.14  .00 1.21  .00    85  0.0
  750323        0183    0    0    0    0    0  .000  .041  3.36  .00 3.15  .00    69  0.0
  750323        0181    0    0    0    0    0  .000  .023  4.40  .00  .26  .00    72  0.0
  750323        0179    0    0    0    0    0  .000  .024  4.30  .00  .16  .00    76  0.0
  750323        0178    0    0    0    0    0  .000  .022  3.72  .00  .37  .00    78  0.0
  750323        0177    0    0    0    0    0  .000  .023  4.04  .00  .16  .00    65  0.0
  750323        0176    0    0    0    0    0  .000  .027  3.72  .00  .31  .00    66  0.0
  750323        0175    0    0    0    0    0  .000  .026  4.04  .00  .05  .00    64  0.0
  750323        0174    0    0    0    0    0  .000  .035  3.93  .00  .16  .00    70  0.0
  750323        0173    0    0    0    0    0  .000  .030  4.09  .00  .10  .00    71  0.0
  750323        0172    0    0    0    0    0  .000  .023  3.67  .00  .52  .00    66  0.0
  750323        0171    0    0    0    0    0  .000  .027  3.67  .00  .63  .00    75  0.0
75APR19   12
  750419        0186    0    0    0    0    0  .000  .050  2.83  .00  .10  .00   101  0.0
  750419        0183    0    0    0    0    0  .000  .045  2.83  .00  .21  .00   101  0.0
  750419        0181    0    0    0    0    0  .000  .046  1.84  .00  .00  .00   110  0.0
  750419        0179    0    0    0    0    0  .000  .050  0.94  .00  .00  .00   112  0.0
  750419        0178    0    0    0    0    0  .000  .052  1.52  .00  .05  .00    81  0.0
  750419        0177    0    0    0    0    0  .000  .056  1.36  .00  .00  .00    79  0.0
  750419        0176    0    0    0    0    0  .000  .056  1.31  .00  .00  .00    99  0.0
  750419        0175    0    0    0    0    0  .000  .052  1.31  .00  .10  .00    92  0.0
  750419        0174    0    0    0    0    0  .000  .050  1.42  .00  .00  .00   101  0.0
  750419        0173    0    0    0    0    0  .000  .048  1.36  .00  .00  .00    85  0.0
  750419        0172    0    0    0    0    0  .000  .053  1.31  .00  .05  .00    96  0.0
  750419        0171    0    0    0    0    0  .000  .047  1.15  .00  .05  .00    85  0.0
75MAY20   17
C 750520        0186    0    0    0    0    0  .000  .154  2.36  .00  .31  .00  2796  0.0
C 750520        0183    0    0    0    0    0  .000  .140  2.62  .00  .37  .00  2822  0.0
C 750520        0181    0    0    0    0    0  .000  .143  2.30  .00  .16  .00  2158  0.0
C 750520        0179    0    0    0    0    0  .000  .160  2.62  .00  .16  .00  2041  0.0
C 750520        0178    0    0    0    0    0  .000  .142  2.30  .00  .21  .00  2062  0.0
C 750520        0177    0    0    0    0    0  .000  .152  2.41  .00  .16  .00  2068  0.0
C 750520        0176    0    0    0    0    0  .000  .153  2.57  .00  .16  .00  1804  0.0
C 750520        0175    0    0    0    0    0  .000  .145  2.62  .00  .21  .00  1772  0.0
C 750520        0174    0    0    0    0    0  .000  .157  2.78  .00  .26  .00  1513  0.0
C 750520        0173    0    0    0    0    0  .000  .160  2.78  .00  .26  .00  1386  0.0
C 750520        0172    0    0    0    0    0  .000  .164  3.04  .00  .26  .00  1308  0.0
C 750520        0171    0    0    0    0    0  .000  .168  2.88  .00  .37  .00  1264  0.0
C 750520        0155    0    0    0    0    0  .000  .130  1.99  .00  .31  .00  5768  0.0
C 750520        0108    0    0    0    0    0  .000  .262  3.77  .00  .37  .00   172  0.0
C 750520        0107    0    0    0    0    0  .000  .290  0.68  .00  .16  .00  1488  0.0
C 750520        0106    0    0    0    0    0  .000  .770  2.88  .00 1.00  .00  1100  0.0
C 750520        0102    0    0    0    0    0  .000  .850  2.10  .00 1.00  .00   802  0.0
75MAY30   12
  750530        0186    0    0    0    0    0  .000  .031  7.08  .00  .58  .00    99  0.0
  750530        0183    0    0    0    0    0  .000  .033  7.55  .00  .26  .00   109  0.0
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    750530     0181     0    0    0    0    0  .000  .039  4.72  .00  .79  .00  112  0.0
    750530     0179     0    0    0    0    0  .000  .036  4.35  .00  .37  .00  105  0.0
    750530     0178     0    0    0    0    0  .000  .034  3.72  .00  .42  .00  116  0.0
    750530     0177     0    0    0    0    0  .000  .034  3.30  .00  .31  .00  116  0.0
    750530     0176     0    0    0    0    0  .000  .032  3.41  .00  .31  .00  115  0.0
    750530     0175     0    0    0    0    0  .000  .032  3.36  .00  .26  .00  122  0.0
    750530     0174     0    0    0    0    0  .000  .031  3.20  .00  .52  .00  111  0.0
    750530     0173     0    0    0    0    0  .000  .034  2.94  .00  .31  .00  103  0.0
    750530     0172     0    0    0    0    0  .000  .034  2.41  .00  .42  .00  104  0.0
    750530     0171     0    0    0    0    0  .000  .035  2.52  .00  .26  .00   99  0.0
75JUN18   12
    750618     0186     0    0    0    0    0  .000  .037  7.97  .00  .58  .00   78  0.0
    750618     0183     0    0    0    0    0  .000  .032  7.55  .00  .37  .00   82  0.0
    750618     0181     0    0    0    0    0  .000  .037  5.29  .00  .68  .00   82  0.0
    750618     0179     0    0    0    0    0  .000  .034  5.40  .00  .37  .00   90  0.0
    750618     0178     0    0    0    0    0  .000  .037  4.98  .00  .47  .00  113  0.0
    750618     0177     0    0    0    0    0  .000  .037  4.46  .00  .42  .00   81  0.0
    750618     0176     0    0    0    0    0  .000  .039  3.98  .00  .58  .00   94  0.0
    750618     0175     0    0    0    0    0  .000  .042  4.09  .00  .47  .00   84  0.0
    750618     0174     0    0    0    0    0  .000  .044  3.72  .00  .84  .00   92  0.0
    750618     0173     0    0    0    0    0  .000  .039  4.19  .00  .31  .00   90  0.0
    750618     0172     0    0    0    0    0  .000  .039  3.62  .00  .42  .00  104  0.0
    750618     0171     0    0    0    0    0  .000  .041  3.36  .00  .26  .00   78  0.0
75JUN27   12
    750627     0186     0    0    0    0    0  .000  .042  2.83  .00  .47  .00    6  0.0
    750627     0183     0    0    0    0    0  .000  .041  3.25  .00  .21  .00    3  0.0
    760627     0181     0    0    0    0    0  .000  .042  2.57  .00  .37  .00    6  0.0
    750627     0179     0    0    0    0    0  .000  .046  2.15  .00  .16  .00    2  0.0
    750627     0178     0    0    0    0    0  .000  .047  3.30  .00  .52  .00  104  0.0
    750627     0177     0    0    0    0    0  .000  .046  3.46  .00  .26  .00  109  0.0
    750627     0176     0    0    0    0    0  .000  .048  3.15  .00  .37  .00  126  0.0
    750627     0175     0    0    0    0    0  .000  .050  3.25  .00  .21  .00  129  0.0
    750627     0174     0    0    0    0    0  .000  .044  3.20  .00  .42  .00  147  0.0
    750627     0173     0    0    0    0    0  .000  .049  3.20  .00  .31  .00  144  0.0
    750627     0172     0    0    0    0    0  .000  .048  3.09  .00  .37  .00  137  0.0
    750627     0171     0    0    0    0    0  .000  .053  2.94  .00  .16  .00  139  0.0
75JUL11   24
C   750711     0186     0    0    0    0    0  .000  .029  2.88  .00  .21  .00   62  0.0
    750711     0186     0    0    0    0    0  .000  .029  2.83  .00  .16  .00   81  0.0
C   750711     0183     0    0    0    0    0  .000  .031  2.41  .00  .58  .00   79  0.0
    750711     0183     0    0    0    0    0  .000  .033  2.73  .00  .16  .00   78  0.0
C   750711     0181     0    0    0    0    0  .000  .035  1.36  .00  .26  .00   74  0.0
    750711     0181     0    0    0    0    0  .000  .042  1.36  .00  .26  .00   74  0.0
C   750711     0179     0    0    0    0    0  .000  .035  1.47  .00  .10  .00   77  0.0
    750711     0179     0    0    0    0    0  .000  .032  1.42  .00  .10  .00   75  0.0
C   750711     0178     0    0    0    0    0  .000  .027  0.42  .00  .10  .00   69  0.0
    750711     0178     0    0    0    0    0  .000  .034  0.31  .00  .05  .00   96  0.0
C   750711     0177     0    0    0    0    0  .000  .029  0.10  .00  .05  .00   84  0.0
    750711     0177     0    0    0    0    0  .000  .032  0.16  .00  .05  .00   54  0.0
C   750711     0176     0    0    0    0    0  .000  .028  0.10  .00  .05  .00   70  0.0
    750711     0176     0    0    0    0    0  .000  .032  0.10  .00  .00  .00   76  0.0
C   750711     0175     0    0    0    0    0  .000  .028  0.16  .00  .05  .00   80  0.0
    750711     0175     0    0    0    0    0  .000  .029  0.05  .00  .05  .00   60  0.0
C   750711     0174     0    0    0    0    0  .000  .035  0.21  .00  .05  .00   88  0.0
    750711     0174     0    0    0    0    0  .000  .026  0.10  .00  .00  .00   74  0.0
C   750711     0173     0    0    0    0    0  .000  .032  0.21  .00  .05  .00   88  0.0
    750711     0173     0    0    0    0    0  .000  .030  0.10  .00  .05  .00   64  0.0
C   750711     0172     0    0    0    0    0  .000  .017  0.26  .00  .05  .00   89  0.0
    750711     0172     0    0    0    0    0  .000  .025  0.21  .00  .00  .00   79  0.0
C   750711     0171     0    0    0    0    0  .000  .027  0.26  .00  .10  .00   70  0.0
    750711     0171     0    0    0    0    0  .000  .028   .31  .00  .10  .00   82  0.0
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75JUL25   12
  750725      0186    0    0    0    0    0   .000   .054   5.56   .00   .26   .00    84   0.0
  750725      0183    0    0    0    0    0   .000   .064   1.21   .00   .05   .00    99   0.0
  750725      0181    0    0    0    0    0   .000   .000   1.21   .00   .05   .00    72   0.0
  750725      0179    0    0    0    0    0   .000   .050   1.36   .00   .10   .00    61   0.0
  750725      0178    0    0    0    0    0   .000   .038   0.16   .00   .05   .00    58   0.0
  750725      0177    0    0    0    0    0   .000   .038   0.16   .00   .05   .00    70   0.0
  750725      0176    0    0    0    0    0   .000   .037   0.26   .00   .05   .00    62   0.0
  750725      0175    0    0    0    0    0   .000   .038   0.10   .00   .00   .00    81   0.0
  750725      0174    0    0    0    0    0   .000   .030   0.05   .00   .05   .00   109   0.0
  750725      0173    0    0    0    0    0   .000   .030   0.05   .00   .05   .00    95   0.0
  750725      0172    0    0    0    0    0   .000   .030   0.10   .00   .10   .00   101   0.0
  750725      0171    0    0    0    0    0   .000   .031   0.10   .00   .05   .00   107   0.0
75AUG13   12
  750813      0186    0    0    0    0    0   .000   .035   0.21   .00   .05   .00    56   0.0
  750813      0183    0    0    0    0    0   .000   .025   0.31   .00   .10   .00    79   0.0
  750813      0181    0    0    0    0    0   .000   .037   0.21   .00   .00   .00    61   0.0
  750813      0179    0    0    0    0    0   .000   .045   0.37   .00   .00   .00    49   0.0
  750813      0178    0    0    0    0    0   .000   .041   0.16   .00   .05   .00    50   0.0
  750813      0177    0    0    0    0    0   .000   .047   0.10   .00   .05   .00    53   0.0
  750813      0176    0    0    0    0    0   .000   .037   0.16   .00   .05   .00    57   0.0
  750813      0175    0    0    0    0    0   .000   .000   0.00   .00   .00   .00     0   0.0
  750813      0174    0    0    0    0    0   .000   .034   0.10   .00   .05   .00    74   0.0
  750813      0173    0    0    0    0    0   .000   .030   0.10   .00   .00   .00    86   0.0
  750813      0172    0    0    0    0    0   .000   .035   0.10   .00   .00   .00    69   0.0
  750813      0171    0    0    0    0    0   .000   .026   0.00   .00   .00   .00    88   0.0
75AUG27   12
  750827      0186    0    0    0    0    0   .000   .151   1.68   .00   .21   .00   114   0.0
  750827      0183    0    0    0    0    0   .000   .133   1.68   .00   .21   .00   120   0.0
  750827      0181    0    0    0    0    0   .000   .173   1.42   .00   .27   .00    92   0.0
  750827      0179    0    0    0    0    0   .000   .132   1.36   .00   .26   .00    91   0.0
  750827      0178    0    0    0    0    0   .000   .170   1.21   .00   .21   .00    92   0.0
  750827      0177    0    0    0    0    0   .000   .172   1.15   .00   .31   .00    94   0.0
  750827      0176    0    0    0    0    0   .000   .172   1.10   .00   .31   .00    71   0.0
  750827      0175    0    0    0    0    0   .000   .159   1.00   .00   .27   .00    78   0.0
  750827      0174    0    0    0    0    0   .000   .162   0.94   .00   .42   .00    91   0.0
  750827      0173    0    0    0    0    0   .000   .147   0.94   .00   .31   .00    73   0.0
  750827      0172    0    0    0    0    0   .000   .140   1.00   .00   .42   .00    94   0.0
  750827      0171    0    0    0    0    0   .000   .199   1.15   .00   .42   .00    95   0.0
75SEP21   12
  750921      0186    0    0    0    0    0   .000   .030   0.68   .00   .05   .00   120   0.0
  750921      0183    0    0    0    0    0   .000   .030   0.68   .00   .00   .00   132   0.0
  750921      0181    0    0    0    0    0   .000   .036   0.89   .00   .00   .00   116   0.0
  750921      0179    0    0    0    0    0   .000   .035   0.89   .00   .00   .00   137   0.0
  750921      0178    0    0    0    0    0   .000   .031   0.63   .00   .05   .00   118   0.0
  750921      0177    0    0    0    0    0   .000   .040   0.52   .00   .00   .00   108   0.0
  750921      0176    0    0    0    0    0   .000   .033   0.68   .00   .00   .00   123   0.0
  750921      0175    0    0    0    0    0   .000   .027   0.63   .00   .00   .00   128   0.0
  750921      0174    0    0    0    0    0   .000   .026   0.63   .00   .10   .00   132   0.0
  750921      0173    0    0    0    0    0   .000   .025   0.63   .00   .05   .00   125   0.0
  750921      0172    0    0    0    0    0   .000   .029   0.73   .00   .10   .00   129   0.0
  750921      0171    0    0    0    0    0   .000   .035   1.05   .00   .10   .00   117   0.0
75OCT11   24
  751011      0186    0    0    0    0    0   .000   .031   0.00   .00   .00   .00   100   0.0
  751011      0183    0    0    0    0    0   .000   .035   0.00   .00   .00   .00    88   0.0
  751011      0181    0    0    0    0    0   .000   .054   0.10   .00   .00   .00    64   0.0
  751011      0179    0    0    0    0    0   .000   .068   0.16   .00   .00   .00    55   0.0
  751011      0178    0    0    0    0    0   .000   .066   0.00   .00   .00   .00   100   0.0
  751011      0177    0    0    0    0    0   .000   .063   0.00   .00   .00   .00    58   0.0
  751011      0176    0    0    0    0    0   .000   .043   0.00   .00   .00   .00    53   0.0
  751011      0175    0    0    0    0    0   .000   .035   0.05   .00   .00   .00   100   0.0
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    751011      0174    0    0    0    0    0  .000  .028  0.05  .00  .00  .00   100  0.0
    751011      0173    0    0    0    0    0  .000  .028  0.00  .00  .00  .00   104  0.0
    751011      0172    0    0    0    0    0  .000  .026  0.00  .00  .00  .00   100  0.0
    751011      0171    0    0    0    0    0  .000  .035  0.00  .00  .00  .00   146  0.0
  C 751011      0183    0    0    0    0    0  .000  .031  0.00  .00  .00  .00    69  0.0
    751011      0183    0    0    0    0    0  .000  .032  0.05  .00  .00  .00    84  0.0
  C 751011      0179    0    0    0    0    0  .000  .060  0.16  .00  .05  .00    96  0.0
    751011      0179    0    0    0    0    0  .000  .056  0.00  .00  .05  .00    84  0.0
  C 751011      0177    0    0    0    0    0  .000  .058  0.00  .00  .00  .00    74  0.0
    751011      0177    0    0    0    0    0  .000  .070  0.05  .00  .05  .00    73  0.0
  C 751011      0175    0    0    0    0    0  .000  .035  0.00  .00  .00  .00    88  0.0
    751011      0175    0    0    0    0    0  .000  .035  0.00  .00  .00  .00    91  0.0
  C 751011      0173    0    0    0    0    0  .000  .032  0.10  .00  .00  .00   113  0.0
    751011      0173    0    0    0    0    0  .000  .029  0.05  .00  .00  .00   115  0.0
  C 751011      0171    0    0    0    0    0  .000  .035  0.05  .00  .00  .00   126  0.0
    751011      0171    0    0    0    0    0  .000  .032  0.00  .00  .05  .00   110  0.0
75NOV 1     1
    751101      0215    0    0    0    0    0  .000  .017  0.25  .00  .00  .00   102  0.0
75NOV15    12
    751115      0186    0    0    0    0    0  .000  .035  0.69  .00  .00  .00   147  0.0
    751115      0163    0    0    0    0    0  .000  .035  0.94  .00  .00  .00   106  0.0
    751115      0181    0    0    0    0    0  .000  .040  0.44  .00  .00  .00   125  0.0
    751115      0179    0    0    0    0    0  .000  .041  0.54  .00  .00  .00   115  0.0
    751115      0178    0    0    0    0    0  .000  .042  0.54  .00  .00  .00    78  0.0
    751115      0177    0    0    0    0    0  .000  .039  0.49  .00  .10  .00   110  0.0
    751115      0176    0    0    0    0    0  .000  .038  0.35  .00  .00  .00   100  0.0
    751115      0175    0    0    0    0    0  .000  .039  0.35  .00  .00  .00   124  0.0
    751115      0174    0    0    0    0    0  .000  .037  0.44  .00  .00  .00   141  0.0
    751115      0173    0    0    0    0    0  .000  .033  0.35  .00  .00  .00   123  0.0
    751115      0172    0    0    0    0    0  .000  .034  0.40  .00  .05  .00   116  0.0
    751115      0171    0    0    0    0    0  .000  .038  0.54  .00  .15  .00   108  0.0
75NOV22     2
  C 751122      0215    0    0    0    0    0  .000  .018  0.99  .00  .10  .00   122  0.0
    751122      0215    0    0    0    0    0  .000  .019  0.99  .00  .00  .00   120  0.0
75DEC13    12
    751213      0186    0    0    0    0    0  .000  .035  3.90  .00  .20  .00    84  0.0
    751213      0183    0    0    0    0    0  .000  .033  3.95  .00  .15  .00    95  0.0
    751213      0181    0    0    0    0    0  .000  .047  3.55  .00  .15  .00    67  0.0
    751213      0179    0    0    0    0    0  .000  .036  3.46  .00  .15  .00    80  0.0
    751213      0178    0    0    0    0    0  .000  .036  3.31  .00  .15  .00    85  0.0
    751213      0177    0    0    0    0    0  .000  .038  3.31  .00  .20  .00    75  0.0
    751213      0176    0    0    0    0    0  .000  .031  3.56  .00  .20  .00    80  0.0
    751213      0175    0    0    0    0    0  .000  .035  3.56  .00  .20  .00    68  0.0
    751213      0174    0    0    0    0    0  .000  .040  3.51  .00  .20  .00    92  0.0
    751213      0173    0    0    0    0    0  .000  .036  3.41  .00  .40  .00    85  0.0
    751213      0172    0    0    0    0    0  .000  .035  3.36  .00  .40  .00    65  0.0
    751213      0171    0    0    0    0    0  .000  .036  3.85  .00  .30  .00    72  0.0
76JAN23    10
    760123      0186    0    0    0    0    0  .000  .000  2.42  .00  .30  .00   126  0.0
    760123      0185    0    0    0    0    0  .000  .000  2.42  .00  .25  .00   132  0.0
    760123      0183    0    0    0    0    0  .000  .000  2.42  .00  .25  .00   132  0.0
    760123      0182    0    0    0    0    0  .000  .000  2.47  .00  .40  .00   136  0.0
    760123      0181    0    0    0    0    0  .000  .000  2.47  .00  .40  .00   136  0.0
    760123      0179    0    0    0    0    0  .000  .004  1.33  .00  .44  .00   117  0.0
    760123      0178    0    0    0    0    0  .000  .000  1.53  .00  .54  .00   122  0.0
    760123      0176    0    0    0    0    0  .000  .004  1.33  .00  .44  .00   117  0.0
    760123      0174    0    0    0    0    0  .000  .000  1.53  .00  .54  .00   122  0.0
    760123      0171    0    0    0    0    0  .000  .000  1.68  .00  .49  .00   117  0.0
76FEB21    23
    760221      0188    0    0    0    0    0  .000  .150  2.17  .00  .35  .00  1393  0.0
    760221      0186    0    0    0    0    0  .000  .136  2.32  .00  .35  .00  1206  0.0
    760221      0185    0   0   0   0   0  .000  .140  2.62  .00  .25  .00 1061  0.0
    760221      0184    0   0   0   0   0  .000  .142  2.57  .00  .30  .00 1129  0.0
    760221      0183    0   0   0   0   0  .000  .140  2.57  .00  .35  .00 1014  0.0
    760221      0182    0   0   0   0   0  .000  .138  2.57  .00  .30  .00  912  0.0
    760221      0181    0   0   0   0   0  .000  .146  2.47  .00  .35  .00  973  0.0
    760221      0180    0   0   0   0   0  .000  .149  2.42  .00  .30  .00  878  0.0
    760221      0179    0   0   0   0   0  .000  .149  2.52  .00  .30  .00  843  0.0
    760221      0178    0   0   0   0   0  .000  .148  2.42  .00  .30  .00  710  0.0
    760221      0177    0   0   0   0   0  .000  .147  2.47  .00  .25  .00  805  0.0
    760221      0176    0   0   0   0   0  .000  .158  2.52  .00  .25  .00  677  0.0
    760221      0175    0   0   0   0   0  .000  .153  2.52  .00  .30  .00  743  0.0
    760221      0174    0   0   0   0   0  .000  .146  2.57  .00  .35  .00  658  0.0
    760221      0173    0   0   0   0   0  .000  .153  2.62  .00  .30  .00  648  0.0
    760221      0172    0   0   0   0   0  .000  .157  2.67  .00  .35  .00  648  0.0
    760221      0171    0   0   0   0   0  .000  .159  2.77  .00  .35  .00  642  0.0
    760221      0161    0   0   0   0   0  .000  .227  2.12  .00  .40  .00  498  0.0
    760221      0159    0   0   0   0   0  .000  .225  2.27  .00  .35  .00  354  0.0
    760221      0158    0   0   0   0   0  .000  .189  2.52  .00  .35  .00  404  0.0
    760221      0155    0   0   0   0   0  .000  .077  5.68  .00  .25  .00  626  0.0
    760221      0153    0   0   0   0   0  .000  .141  3.06  .00  .35  .00  539  0.0
    760221      0140    0   0   0   0   0  .000  .154  3.70  .00  .25  .00  761  0.0
76MAR13    15
    760313      0186    0   0   0   0   0  .000  .057  2.86  .00  .44  .00  651  0.0
    760313      0185    0   0   0   0   0  .000  .073  2.81  .00  .54  .00  673  0.0
    760313      0184    0   0   0   0   0  .000  .081  2.91  .00  .64  .00  128  0.0
    760313      0183    0   0   0   0   0  .000  .078  2.81  .00  .54  .00  140  0.0
    760313      0182    0   0   0   0   0  .000  .092  2.86  .00  .59  .00  147  0.0
    760313      0181    0   0   0   0   0  .000  .111  2.22  .00  .64  .00  134  0.0
    760313      0180    0   0   0   0   0  .000  .120  2.27  .00  .59  .00  144  0.0
    760313      0179    0   0   0   0   0  .000  .117  2.17  .00  .54  .00  144  0.0
    760313      0178    0   0   0   0   0  .000  .127  1.98  .00  .64  .00  162  0.0
    760313      0177    0   0   0   0   0  .000  .126  2.02  .00  .59  .00  158  0.0
    760313      0176    0   0   0   0   0  .000  .137  1.88  .00  .54  .00  158  0.0
    760313      0175    0   0   0   0   0  .000  .130  1.88  .00  .49  .00  120  0.0
    760313      0174    0   0   0   0   0  .000  .118  1.73  .00  .54  .00  162  0.0
    760313      0173    0   0   0   0   0  .000  .110  1.73  .00  .54  .00  168  0.0
    760313      0172    0   0   0   0   0  .000  .115  1.73  .00  .49  .00  182  0.0
76MAR27    16
    760327      0186    0   0   0   0   0  .000  .040  2.17  .00  .10  .00   87  0.0
    760327      0185    0   0   0   0   0  .000  .041  2.17  .00  .15  .00   74  0.0
    760327      0184    0   0   0   0   0  .000  .040  2.17  .00  .15  .00   66  0.0
    760327      0183    0   0   0   0   0  .000  .041  2.17  .00  .10  .00   84  0.0
    760327      0182    0   0   0   0   0  .000  .042  2.17  .00  .10  .00   80  0.0
    760327      0181    0   0   0   0   0  .000  .042  1.73  .00  .10  .00   77  0.0
    760327      0180    0   0   0   0   0  .000  .038  1.78  .00  .10  .00   88  0.0
    760327      0179    0   0   0   0   0  .000  .044  1.73  .00  .00  .00   77  0.0
    760327      0178    0   0   0   0   0  .000  .046  1.73  .00  .05  .00   80  0.0
    760327      0177    0   0   0   0   0  .000  .047  1.63  .00  .10  .00   81  0.0
    760327      0176    0   0   0   0   0  .000  .046  1.63  .00  .05  .00   90  0.0
    760327      0175    0   0   0   0   0  .000  .053  1.63  .00  .05  .00   81  0.0
    760327      0174    0   0   0   0   0  .000  .060  1.63  .00  .10  .00  118  0.0
    760327      0173    0   0   0   0   0  .000  .058  1.68  .00  .25  .00  114  0.0
    760327      0172    0   0   0   0   0  .000  .062  1.68  .00  .25  .00  113  0.0
    760327      0171    0   0   0   0   0  .000  .073  1.63  .00  .30  .00  185  0.0
76APR09    16
    760409      0186  132 416 307 187  94  .075  .003  1.31  .24  .05  .35  352 25.7
    760409      0185  128 446 328 194 125  .107  .003  1.31  .25  .06  .24  404 23.4
    760409      0184  134 466 343 196 115  .150  .003  1.32  .23  .08  .12  344 24.0
    760409      0183  136 486 357 191  94  .113  .003  1.34  .22  .03  .17  352 25.0
    760409      0182  123 452 332 183 105  .107  .003  1.26  .22  .04  .16  264 27.0
    760409      0181  125 462 340 188 107  .118  .003  0.78  .20  .04  .16  364 30.0
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 760409     0180  133 466 343 201 117  .150  .003  0.83  .18  .13  .07   408 24.0
 760409     0179  129 462 340 196 102  .113  .003  0.77  .17  .12  .18   400 25.0
 760409     0178  121 461 339 196 167  .410  .003  0.43  .15  .10  .20   452 25.7
 760409     0177  134 492 361 201 111  .204  .003  0.41  .11  .16  .04   412 30.7
 760409     0176  127 485 356 181 100  .166  .003  0.38  .14  .05  .15   368 25.5
 760409     0175  131 472 347 207 100  .107  .003  0.36  .15  .04  .26   432 24.9
 760409     0174  125 426 314 185 110  .193  .003  0.38  .15  .03  .27   376 23.5
 760409     0173  132 485 356 199  88  .166  .003  0.40  .15  .05  .25   396 25.9
 760409     0172  102 439 323 167 115  .193  .003  0.47  .16  .03  .27   424 25.9
 760409     0171  101 442 325 169 118  .258  .003  0.69  .18  .02  .28   400 27.0
76APR25   20
 760425     0186  127 494 363 195 240 1.210  .023  6.44  .29 1.47 2.03   664 21.0
 760425     0185  128 493 363 205 235  .999  .023  6.37  .25 1.01 1.99   672 23.4
 760425     0184  131 499 366 198 250  .929  .026  6.62  .22 1.06 1.94   616 18.0
 760425     0183  132 462 340 199 255 1.010  .026  6.77  .21 1.17 1.83   620 18.7
 760425     0182  124 495 363 194 170  .923  .026  6.64  .20  .84 1.46   572 18.7
 760425     0181  115 475 349 183 175 1.110  .049  5.04  .26 1.71 1.99   576 25.7
 760425     0180  115 482 354 196 160 1.100  .052  5.19  .27 2.30 1.60   548 24.5
 760425     0179  110 461 339 188 175 1.100  .052  5.27  .27 2.14 1.86   500 24.5
 760425     0178  117 481 353 187 185 1.200  .046  5.51  .27 2.82 1.28   532 23.9
 760425     0177  113 475 349 192 145 1.300  .062  5.79  .29 2.37 2.03   396 22.7
 760425     0176  110 455 335 182 165 1.300  .065  6.63  .32 3.13 2.07   452 23.2
 760425     0175   99 459 337 197 150 1.260  .072  8.19  .39 3.61 2.49   404 22.2
 760425     0174  108 485 356 185 160 1.150  .068  7.59  .33 3.53 1.87   444 23.2
 760425     0173   97 469 345 180 160 1.230  .059  7.96  .33 3.74 2.06   432 23.9
 760425     0172  112 502 368 198 135  .885  .065  8.21  .34 3.92 1.98   476 25.2
 760425     0171   90 469 345 180 177  .990  .078  8.94  .37 4.53 2.37   500 21.9
 760425     0165   93 306 227 212 355 2.340  .196  7.68 0.20 1.23 2.87   720 36.4
 760425     0162   71 331 245 207 445 2.790  .280  8.21  .18 2.50 2.90   872 39.7
 760425     0159   75 464 341 132 500 5.970  .594  2.86  .22 3.63 2.97   720 27.4
 760425     0158   57 241 181  88 145  .810  .052  4.76  .03  .21 1.89   364  9.7
76MAY15   16
 760515     0186  179 295 219 241 115  .205  .003  1.59  .05  .05  .45   496 22.9
 760515     0185  168 288 214 224 100  .260  .003  1.61  .05  .04  .46   468 21.7
 760515     0184  176 295 219 237  90  .260  .003  1.59  .05  .04  .46   424 26.4
 760515     0183  154 270 201 209 110  .285  .003  1.46  .05  .04  .66   420 23.0
 760515     0182  175 302 224 238  98  .255  .003  1.46  .05  .06  .54   480 21.4
 760515     0181  156 288 214 211 105  .305  .003  0.32  .06  .09  .71   456 27.4
 760515     0180  152 295 219 224 110  .400  .003  0.36  .06  .11  .59   556 23.0
 760515     0179  161 306 227 219 110  .310  .003  0.29  .06  .10  .60   492 24.5
 760515     0178  160 284 211 218  98  .425  .003  0.12  .04  .09  .51   488 22.0
 760515     0177  155 295 219 224 105  .305  .003  0.10  .05  .10  .60   520 27.0
 760515     0176  178 309 229 239 108  .345  .007  0.01  .05  .13  .67   548 24.0
 760515     0175  183 317 235 233 112  .315  .003  0.09  .05  .10  .60   552 21.7
 760515     0174  175 313 232 232 120  .250  .003  0.14  .05  .08  .42   548 24.5
 760515     0173  167 302 224 214 120  .190  .007  0.18  .05  .10  .30   512 20.4
 760515     0172  171 313 232 218 115  .200  .003  0.15  .05  .10  .40   552 21.7
 760515     0171  160 313 232 217 107  .255  .003  0.20  .07  .09  .51   564 19.7
76MAY28   16
 760528      186  175 506 371 263  62 0.098 0.016  0.80 0.64 0.05 0.25   336 22.2
 760528      185  188 530 389 288  74 0.064 0.023  0.92 0.65 0.37 0.05   360 18.7
 760528      184  158 486 357 249  76 0.049 0.020  0.92 0.64 0.75 0.06   736 21.2
 760528      183  177 506 371 271  42 0.043 0.016  0.86 0.63 0.38 0.05   356 19.7
 760528      182  169 506 371 256  66 0.092 0.013  0.79 0.64 0.44 0.04   344 20.9
 760528      181  150 481 353 235  84 0.042 0.016  0.04 0.05 0.08 0.32   292 24.0
 760528      180  166 496 364 257  60 0.354 0.020  0.05 0.07 0.05 0.45   328 23.4
 760528      179  160 502 368 258  48 0.219 0.029  0.07 0.01 0.06 0.94   280 22.7
 760528      178  172 523 384 267  70 0.304 0.020  0.01 0.67 0.07 1.03   284 28.7
 760528      177  141 468 344 233  58 0.269 0.026  0.01 0.50 0.04 1.06   668 21.5
 760528      176  173 521 382 263  60 0.092 0.026  0.01 0.65 0.05 0.95   280 26.7
 760528      175  171 511 375 261  66 0.184 0.020  0.01 0.64 0.05 1.05   272 24.4
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  760528       174   201  549  402  290    74 0.049  0.023   0.01 0.57 0.06 0.94    316 22.5
  760528       173   198  544  399  280    60 0.038  0.029   0.10 0.01 0.61 0.29    348 21.2
  760528       172   176  522  383  251    48 0.580  0.029   0.13 0.01 0.85 0.05    292 25.0
  760528       171   190  571  418  284    70 0.057  0.036   0.12 0.06 0.07 0.83    232 21.5
76MAY29    7
  760529       186   147  452  332  235    58 0.191  0.007   4.09 0.91 0.03 0.47    496 14.2
  760529       183   159  451  332  238    34 0.027  0.010   1.71 0.79 0.04 0.36    816 13.0
  760529       181   135  371  274  189    78 0.085  0.007   0.77 0.68 0.05 0.25    436  9.7
  760529       179   161  452  332  236    58 0.212  0.003   0.90 0.72 0.05 0.25    508 15.7
  760529       178   242  643  470  329    14 2.69   0.701   1.15 0.58 0.09 1.31    544 15.7
  760529       177   234  608  445  299    10 1.88   0.642   0.83 0.62 0.09 0.41    548 16.4
  760529       176   206  498  366  255    18 0.976  0.095   0.02 0.20 0.02 0.28    536  9.0
76JUN10   87
  760610       103   150  752  548  300   110 0.028  0.004   0.72 0.31 1.80 0.50    640 48.1
  760610       104   151  818  596  446    35 0.512  0.095   3.90 0.47 0.14 0.76    956 92.7
  760610       105   171  900  655  450    82 1.70   0.012   0.22 0.18 2.95 2.75    848 81.6
  760610       106   250  726  530  358    58 0.875  0.017   0.08 0.11 2.90 1.90    528 51.6
  760610       109   189  803  585  414    70 1.45   0.883   0.28 0.33 4.61 0.49    956 75.0
  760610       110   2131100  799  478    36 3.88   0.882   0.18 0.22 5.00 2.90    852 82.1
  760610       111   135  894  651  350   165 1.57   0.098   0.15 0.21 1.20 2.00    996 69.9
  760610       112   174  880  641  297    38 0.704  0.078   0.50 0.48 1.45 2.25    972 50.7
  760610       113   220  850  619  286    39 0.121  0.026   0.08 0.27 0.30 1.80    856 62.0
  760610       114   104  894  651  273    36 2.33   0.005   0.01 0.12 0.27 1.63    944 57.0
  760610       115   16115181099  376    64 4.76   0.009   0.01 0.01 9.40 7.6    1264 58.0
  760610       116   32718751357  400    46 4.45   0.770   0.16 0.27 5.7510.25   1500 73.6
  760610       117   3261364  989  304    70 3.63   0.734   0.01 0.09 6.70 7.10   1160 40.4
  760610       118   24214581057  280    60 1.49   0.160   1.2010.02 0.6415.36   1280 50.6
  760610       119   1971188  863  295    84 0.498  0.359   2.24 0.11 0.35 1.55   1108 59.1
  760610       120   140  664  630  225    86 0.327  0.033   0.44 0.41 0.30 1.10    888 27.0
  760610       121   150  990  721  184   105 0.391  0.013   0.10 0.17 0.25 0.95    964 31.2
  760610       122   224  994  723  192    90 0.277  0.039   0.13 0.21 0.25 1.05    688 48.2
  760610       123   1821058  769  203    34 0.583  0.166   0.05 0.17 0.30 1.30    976 31.5
  760610       124   3061046  761  240    32 0.796  0.183   0.01 0.15 0.35 1.15   1012 35.9
  760610       125   1461112  807  238    94 0.683  0.124   0.10 0.21 0.36 1.04   1028 37.1
  760610       126   2101069  775  247    98 0.242  0.020   0.01 0.07 0.30 1.10    992 67.7
  760610       127   116  788  574  223    79 0.142  0.013   0.01 0.11 0.25 0.85    852 51.2
  760610       128    79  850  619  171    72 0.028  0.016   0.01 0.02 0.30 0.80    884 59.6
  760610       129    61  600  439  124   115 0.128  0.010   0.01 0.11 0.28 0.62    684 53.8
  760610       130    61  850  619   93   100 0.640  0.010   0.01 0.04 0.32 0.98    528 28.6
  760610       131   109  821  598  138   110 0.348  0.023   0.01 0.03 0.30 1.10    524 28.5
  760610       132   101  616  451  184    80 0.049  0.007   0.01 0.03 0.14 0.86    364 50.6
  760610       133    90  510  374  180    60 0.050  0.003   0.01 0.01 0.11 0.59    660 50.1
  760610       134    84  567  415  158    25 0.032  0.003   0.01 0.01 0.14 0.46    728 42.2
  760610       135    77  541  397  176    70 0.007  0.003   0.01 0.01 0.11 0.69    688 34.2
  760610       136    75  572  419  162    64 0.054  0.003   0.01 0.01 0.11 0.49    696 32.4
  760610       137   142  648  474  169    83 0.058  0.003   0.04 0.03 0.15 0.35    768 34.2
  760610       138   107  626  458  234    80 0.022  0.003   0.01 0.01 0.09 0.71    768 38.4
  760610       139    96  512  376  204    80 0.032  0.003   0.01 0.01 0.09 1.01    676 29.5
  760610       140   135  616  451  165    79 0.069  0.003   0.01 0.01 0.11 0.59    732 35.0
  760610       141   146  680  497  195    60 0.029  0.003   0.01 0.01 0.16 0.34    744 40.0
  760610       142   101  521  382  247    23 0.011  0.003   0.01 0.01 0.09 0.21    692 38.4
  760610       143    88  523  384  194    70 0.011  0.003   0.50 0.18 0.09 0.91    716 37.9
  760610       144    91  529  388  177    60 0.157  0.003   0.46 0.17 0.09 0.51    704 35.9
  760610       145    87  531  389  181    74 0.127  0.003   0.24 0.12 0.11 0.49    504 34.2
  760610       146   108  556  407  183    60 0.173  0.003   0.12 0.07 0.09 0.41    560 34.2
  760610       147    97  512  376  216    64 0.096  0.003   0.20 0.11 0.09 0.11    612 37.5
  760610       148   117  572  419  188    44 0.088  0.003   0.20 0.11 0.16 0.44    464 36.4
  760610       149   104  531  389  222    50 0.261  0.003   0.24 0.13 0.11 0.89    504 36.5
  760610       150    92  521  382  245    58 0.146  0.003   0.40 0.19 0.09 0.71    532 35.9
  760610       151    95  531  389  186    66 0.038  0.003   0.26 0.14 0.10 0.60    464 31.4
  760610       152    89  510  374  196    66 0.058  0.003   0.09 0.06 0.09 0.41    504 34.5
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 760610      153   79 496 364 189   70 0.016 0.010   0.01 0.01 0.05 0.25   576 29.5
 760610      154   95 536 394 165   70 0.468 0.023   0.01 0.05 0.09 0.21   576 35.0
 760610      155  152 637 466 197   58 0.111 0.003   0.01 0.01 0.10 0.20   564 32.7
 760610      156  103 529 388 261   28 0.081 0.003   0.01 0.01 0.07 0.33   480 27.4
 760610      157  115 616 451 195   50 0.607 0.039   0.01 0.01 0.10 1.10   528 24.7
 760610      162  2401058 769 247   74 1.32  0.130   3.85 0.55 3.00 6.30   844 65.4
 760610      163  28020631492 510   24 1.36  0.607   1.98 0.23 3.04 2.16  1448 68.7
 760610      164  25517991301 454   30 1.52  0.564   3.52 0.56 4.36 1.84  1200 56.4
 760610      165  155 709 517 238   28 0.622 0.013   0.80 0.38 0.72 1.28   636 24.7
 760610      166  249 927 674 228   43 1.33  0.173   0.01 0.06 2.83 1.87   784 31.0
 760610      167  244 709 517 290   28 0.964 0.160   0.01 0.02 2.11 1.79   652 26.4
 760610      168  189 540 396 282  230 1.24  0.088   0.01 0.02 0.70 1.70   948 11.0
 760610      170  185 648 474 214   54 0.269 0.088   0.01 0.01 0.12 0.28   580 39.7
 760610      171  144 454 334 298   20 0.077 0.003   0.01 0.07 0.09 0.41   468 22.2
 760610      172  123 448 330 217   30 0.084 0.003   0.01 0.06 0.08 0.32   456 22.0
 760610      173  107 419 309 199   18 0.142 0.003   0.01 0.01 0.07 0.23   380 20.0
 760610      174  138 467 343 177   32 0.077 0.003   0.01 0.01 0.07 0.23   448 20.9
 760610      175  116 394 291 209   10 0.209 0.003   0.01 0.01 0.11 0.19   392 16.5
 760610      176  144 427 314 170   12 0.201 0.003   0.01 0.02 0.13 0.37   492 20.9
 760610      177  156 458 337 185   30 0.124 0.003   0.01 0.04 0.08 0.42   508 24.7
 760610      178  148 481 354 201   14 0.139 0.003   0.01 0.06 0.12 0.28   516 23.4
 760610      179  121 436 321 230   32 0.232 0.003   0.01 0.05 0.09 0.31   540 24.4
 760610      180  131 485 356 195   12 0.209 0.003   0.01 0.08 0.10 0.20   516 25.7
 760610      181  113 362 268 210   28 0.170 0.003   0.01 0.07 0.10 0.30   508 27.4
 760610      182  131 443 326 190   30 0.011 0.003   0.01 0.02 0.05 0.25   516 20.0
 760610      183  114 420 309 213   13 0.062 0.003   1.73 0.25 0.04 0.26   480 26.4
 760610      184  113 375 277 192   20 0.046 0.003   1.24 0.24 0.04 0.26   476 21.5
 760610      185  132 424 312 192   26 0.926 0.003   1.13 0.23 0.04 0.26   488 22.5
 760610      186   92 382 282 222   12 0.037 0.003   1.03 0.22 0.03 0.27   464 22.7
 760610      187   62 371 274 166   22 0.046 0.003   1.24 0.21 0.10 0.20   344 20.9
 760610      188   65 342 253 129   28 0.139 0.003   0.01 0.01 0.10 0.20   336 24.7
 760610      189   84 392 289 131   42 0.248 0.003   0.01 0.06 0.11 0.19   400 29.0
 760610      190   64 379 280 156   34 0.093 0.003   0.01 0.01 0.11 0.29   360 28.2
 760610      191  195 607 444 346   18 1.03  0.055   0.15 0.06 5.08 0.82   644 46.6
 760610      193  206 616 451 306   25 0.859 0.059   1.02 0.06 0.51 0.99   512 31.0
 760610      195  123 432 318 267   16 0.139 0.003   1.64 0.14 0.11 0.59   544 27.0
 760610      196  108 382 282 220   16 0.743 0.062   0.14 0.06 0.13 0.17   496 25.4
 760610      199   77 374 276 179   54 0.217 0.003   0.21 0.11 0.16 0.24   544 25.7
 760610      208   61 382 282 115   25 0.155 0.003   1.28 0.12 0.10 0.20   392 27.0
76JUN25   16
 760625      171  137 562 412 354   43 0.852 0.052   2.45 0.17 0.14 1.06   584 24.0
 760625      172  171 594 435 350   32 0.328 0.013   1.47 0.16 0.13 0.97   588 28.0
 760625      173  151 557 408 259   39 0.161 0.007   1.35 0.17 0.13 0.77   724 26.4
 760625      174  164 599 438 364   29 0.322 0.016   1.12 0.17 0.15 0.95   724 26.7
 760625      175  178 620 453 341   17 0.203 0.016   0.55 0.13 0.15 0.75   732 27.4
 760625      176  197 630 461 365   16 0.209 0.016   0.46 0.13 0.16 0.84   704 28.2
 760625      177  281 583 427 354   12 0.083 0.016   0.28 0.12 0.14 0.66   560 22.7
 760625      178  190 609 446 344   20 0.226 0.016   0.31 0.12 0.15 0.55   676 22.7
 760625      179  275 572 419 340   23 0.089 0.013   0.31 0.10 0.15 0.45   652 18.7
 760625      180  183 588 430 348   29 0.191 0.016   0.36 0.10 0.15 0.45   660 22.5
 760625      181  188 557 408 349   11 0.070 0.013   0.26 0.10 0.14 0.46   660 20.9
 760625      182  183 539 395 355   23 0.054 0.010   1.22 0.16 0.09 0.41   620 19.4
 760625      183  184 528 387 339   31 0.124 0.010   0.16 0.19 0.07 0.33   592 16.4
 760625      184  172 496 364 322   25 0.042 0.010   0.14 0.17 0.08 0.32   612 18.0
 760625      185  182 499 366 332   21 0.054 0.016   0.12 0.17 0.08 0.32   600 20.5
 760625      186  170 473 348 337   35 0.032 0.007   0.16 0.18 0.06 0.24   620 18.7
76JUN28    6
 760628      162  42615161099 566  165 9.16  1.396   0.01 0.0116.4        1404 56.1
 760628      165  210 498 366 319   36 0.651 0.006   0.01 0.01 0.30 0.40   556 15.7
 760628      166  177 683 499 380    6 1.74  0.006   1.45 0.04 2.55 2.65   756 31.0
 760628      167  176 778 567 286   32 0.81200.091   3.0500.03 2.98 3.02   736 31.2
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  760628        168   171 724 528 380    60 1.04  0.075   0.04 0.04 2.73 3.37   808 35.5
  760628        170   162 670 489 294    16 0.558 0.068   0.72 0.06 0.17 1.73   756 42.2
76JUN29   22
  760629        104   201 872 635 446    44 0.595 0.117   1.63 0.06 3.08 1.42   816 68.6
  760629        105   220 918 668 466   124 1.486 0.300   1.44 0.06 4.07 1.53   924 72.3
  760629        109   203 886 645 442    52 0.878 0.254   1.67 0.14 0.34 1.36   896 81.4
  760629        110   283 929 676 446    24 1.323 0.385   0.62 0.06 1.45 1.55   844 64.4
  760629        112   103 799 582 345    40 0.097 0.003   0.01 0.01 0.20 1.30   692 65.1
  760629        113    72 454 334 259    26 0.216 0.020   0.01 0.01 0.40 1.00   396 32.0
  760629        114   2571210 879 314    19 1.65  0.802   0.22 0.07 6.73 5.87   948 35.0
  760629        115   32515121095 380    25 3.46  1.28    0.17 0.05 6.73 6.87  1148 36.4
  760629        116   33117281253 370    16 8.06  1.77    4.63 0.10 1.72 1.68  1172 58.7
  760629        117   33114581057 308    23 3.75  1.23    1.05 0.03 4.18 1.42  1068 37.5
  760629        118   1331080 785 274    39 1.37  0.205   0.35 0.05 0.38 1.02   868 31.0
  760629        119   175 872 635 270    20 0.498 0.075   0.01 0.01 0.28 0.72   652 24.9
  760629        120   140 945 687 272    32 0.476 0.055   0.01 0.01 0.26 0.84   724 28.2
  760629        121   119 529 388 120    13 0.287 0.075   0.01 0.01 0.14 0.46   368 12.0
  760629        122   179 972 707 282    29 0.437 0.072   0.01 0.01 0.20 0.80   596 26.0
  760629        123   189 864 630 328    16 0.816 0.179   0.01 0.01 0.23 0.67   560 22.2
  760629        124   189 972 707 341    12 0.688 0.179   0.01 0.01 0.27 0.83   728 24.4
  760629        125   142 886 645 269    23 0.316 0.111   0.01 0.01 0.24 0.66   632 22.5
  760629        126   124 819 597 264    32 0.181 0.072   0.01 0.01 0.23 0.67   688 22.7
  760629        127   126 683 499 284    44 0.370 0.033   0.01 0.01 0.20 0.70   656 19.2
  760629        128   129 742 541 264    47 0.542 0.104   0.01 0.01 0.18 0.92   720 22.2
  760629        129   172 742 541 268    29 0.507 0.078   0.01 0.01 0.17 0.83   652 21.9
76JUN30   24
  760630        191   260 864 630 436    49 0.490 0.039   0.01 0.02 0.51 2.09   840 51.4
  760630        192   236 788 574 356    43 0.434 0.003   0.01 0.01 0.06 0.54   720 42.4
  760630        193   268 840 612 368    17 0.911 0.111   0.29 0.03 0.20 1.20   716 38.7
  760630        194   197 657 480 300    44 0.186 0.003   0.15 0.03 0.07 0.33  1072 33.4
  760630        195   158 490 360 356    30 0.083 0.003   0.03 0.05 0.05 0.25   604 31.0
  760630        196   161 467 343 359    30 0.099 0.003   0.01 0.01 0.08 0.22   488 25.4
  760630        197   138 443 326 299    41 0.042 0.003   0.01 0.01 0.05 0.35   496 24.7
  760630        198   149 487 358 333    28 0.087 0.007   0.01 0.01 0.07 0.33   524 21.7
  760630        199   122 427 314 283    30 0.062 0.003   0.01 0.01 0.08 0.22   476 18.7
  760630        200   126 475 349 320    29 0.112 0.007   0.84 0.10 0.07 0.33   656 22.7
  760630        201   155 518 380 361    22 0.081 0.010   0.99 0.11 0.08 0.32   524 29.4
  760630        202   148 468 344 352    19 0.074 0.013   0.98 0.13 0.09 0.51   584 26.7
  760630        203   149 507 372 359    26 0.099 0.010   0.70 0.11 0.09 0.41   584 25.5
  760630        204   134 484 355 348    19 0.236 0.010   0.62 0.10 0.07 0.13   564 24.7
  760630        205   157 506 371 361    33 0.334 0.010   0.60 0.10 0.07 0.23   704 25.5
  760630        206   147 494 363 348    20 0.174 0.007   0.41 0.09 0.07 0.23   652 25.4
  760630        208   158 510 374 360    18 0.074 0.007   0.33 0.09 0.08 0.22   672 25.5
  760630        209   130 391 289 299    15 0.260 0.010   0.05 0.05 0.05 0.55   576 18.7
  760630        210   163 518 380 353    12 0.031 0.013   0.10 0.07 0.06 0.44   624 26.7
  760630        211   142 457 336 334    20 0.043 0.003   0.03 0.05 0.05 0.55   616 27.2
  760630        212   149 502 368 252    33 0.378 0.003   0.01 0.05 0.08 0.52   692 30.5
  760630        213   165 594 435 294    13 0.037 0.003   0.01 0.01 0.01 0.29        23.7
  760630        214   155 391 289 228    38 0.125 0.003   0.42 0.16 0.10 0.50   520 16.7
  760630        215   122 447 329 186    30 0.089 0.003   0.01 0.01 0.04 0.36   544 27.0
76JUL01   26
  760701        138   173 775 565 261    12 0.307 0.033   0.02 0.01 0.32 0.18   624 30.7
  760701        139   164 738 538 262     9 0.312 0.023   0.02 0.01 0.15 0.35   576 29.7
  760701        140   132 649 474 229    31 0.196 0.010   0.01 0.01 0.14 0.26   532 28.4
  760701        141   131 620 453 230    40 0.254 0.010   0.02 0.01 0.15 0.35   560 29.0
  760701        142   131 587 430 239    28 0.159 0.007   0.02 0.01 0.15 0.25   536 27.7
  760701        143   128 594 435 226    32 0.185 0.007   0.03 0.01 0.14 0.46   484 25.0
  760701        144   124 597 437 229    44 0.312 0.007   0.05 0.01 0.14 0.26   524 25.4
  760701        145   144 573 420 218    40 0.164 0.007   0.03 0.01 0.11 0.29   520 28.2
  760701        146   137 613 448 247    68 0.286 0.010   0.03 0.01 0.11 0.19   528 27.5
  760701        147   145 556 407 241    60 0.323 0.007   0.04 0.01 0.09 1.31   524 26.5
  760701       148   151  608  445  263    34 0.196  0.007   0.03  0.01  0.13  0.27    552  29.9
  760701       149   148  610  446  260    26 0.146  0.007   0.03  0.01  0.13  0.27    636  27.5
  760701       150   145  613  448  256    46 0.218  0.010   0.03  0.01  0.13  0.17    484  32.9
  760701       151   119  552  404  229    60 0.209  0.010   0.04  0.01  0.12  0.28    604  28.4
  760701       152   123  551  404  235    42 0.141  0.003   0.04  0.01  0.14  0.36    544  28.7
  760701       153   119  555  407  226    60 0.109  0.003   0.04  0.01  0.12  0.58    688  32.0
  760701       154   120  539  395  227    52 0.118  0.003   0.04  0.01  0.14  0.36    604  28.4
  760701       155   149  598  438  259    34 0.123  0.003   0.04  0.01  0.10  0.40   1076  30.2
  760701       156   133  474  348  218    48 0.164  0.003   0.04  0.01  0.07  0.43    576  21.7
  760701       157   118  454  334  232   300 1.28   0.068   8.39  0.21  0.22  0.98    636  15.7
  760701       187   157  545  399  252    19 0.050  0.003   0.05  0.01  0.07  0.23    632  25.4
  760701       188   156  551  404  252    21 0.068  0.003   0.05  0.01  0.05  0.25    628  28.2
  760701       189   147  583  427  251   240 0.305  0.016   0.05  0.05  0.11  0.29    692  28.4
  760701       190   119  513  376  214    32 0.109  0.003   0.04  0.01  0.08  0.42    600  24.7
  760701       207   149  521  382  269    12 0.073  0.003   0.04  0.01  0.11  0.29    552  28.0
  760701       216   2591158  841  219     6 0.023  0.003   4.81  0.01  0.04  0.16   1280105.4
76JUL02     8
  760702       130   1101100  799  198    29 0.370  0.042   0.01  0.01  0.33  0.67    984  22.7
  760702       131   1561019  739  206    21 0.340  0.039   0.01  0.01  0.16  0.64    788  21.2
  760702       132   173  742  541  250    13 0.221  0.003   0.01  0.01  0.08  0.52    832  36.2
  760702       133   147  683  499  226    26 0.131  0.003   0.01  0.01  0.08  0.52    788  38.0
  760702       134   141  636  465  303    47 0.310  0.010   0.01  0.01  0.08  0.42    740  30.5
  760702       135   147  583  427  244     6 0.042  0.003   0.01  0.43  0.04  0.26    656  21.5
  760702       136   217  763  556  229     6 0.069  0.003   0.01  0.38  0.03  0.47    780  30.5
  760702       137   155  624  456  259    13 0.340  0.010   0.01  0.01  0.10  0.50    688  21.5
76JUL13    21
  760713       104   221  884  643  393    75 1.88   0.130   0.01  0.01  4.31  0.89    548  80.8
  760713       113    92  572  419  134   110 0.502  0.088   0.01  0.01  0.62  1.58    196  30.7
  760713       114   154  728  531  171   135 0.642  0.095   0.01  0.01  0.81  1.49    280  23.4
  760713       115   384193213 99  333   8410.03   1.13    0.01  0.05  4.3012.70   1132  50.7
  760713       162   595235215 19  410   13012.51  1.794   0.01  0.02  9.8521.15   1420  77.8
  760713       165   215  426  314  164   180 2.00   0.052   0.01  0.01  1.43  0.07    308   2.0
  760713       170   170  650  475  285    88 1.69   0.049   0.01  0.01  0.25  1.75    556  41.0
  760713       171   183  624  456  231    85 0.465  0.039   0.01  0.01  0.12  0.38    504  18.0
  760713       173   149  458  337  176    33 0.167  0.039   0.01  0.01  0.29  0.31    300  14.0
  760713       174   152  426  314  180   100 0.246  0.042   0.01  0.01  0.25  0.35    296  12.0
  760713       175   151  468  344  203    64 0.549  0.046   0.01  0.01  0.25  0.45    368  15.7
  760713       178   169  473  348  204    56 0.679  0.036   0.01  0.01  0.35  0.35    340  14.0
  760713       179   143  442  325  202    58 0.428  0.036   0.01  0.01  0.44  0.06    308  17.4
  760713       180   161  456  335  203    63 0.553  0.023   0.01  0.01  0.57  0.13    244  12.0
  760713       181   144  440  324  185    50 0.502  0.036   0.01  0.01  0.51  0.09    276  13.3
  760713       182   129  408  301  171    80 0.270  0.023   0.01  0.01  0.26  0.24    324  19.4
  760713       183   140  452  332  215    74 0.200  0.033   0.01  0.01  0.16  0.64    668  23.4
  760713       184   165  478  351  227    78 0.269  0.036   0.01  0.01  0.17  0.43    264  23.4
  760713       185   148  488  358  197    80 0.339  0.036   0.01  0.01  0.23  0.17    276  21.4
  760713       186   124  406  299  173    39 0.209  0.023   0.01  0.01  0.28  0.22    300  18.7
C 760713       501   334187613 57  308    7122.08  2.054   0.01  0.05  8.0622.45   1056  36.4
76JUL14    18
  760714       116   323  988  718  346    2011.25  1.696   0.01  0.98  1.83  3.67   1304  61.7
  760714       117   2961040  755  319    52 3.06   0.669   0.01  1.36  1.31  2.49   1396  50.7
  760714       140   137  610  446  190    60 0.884  0.020   0.01  0.01  0.30  0.70    488  23.5
  760714       141   168  769  561  245    24 0.786  0.013   0.01  0.01  0.41  0.49    620  33.4
  760714       142   149  735  536  221   134 0.544  0.016   0.01  0.01  0.31  0.49    632  36.7
  760714       143   138  714  521  219    90 0.484  0.029   0.01  0.01  0.28  0.42   1032  43.4
  760714       191   225  714  521  340   157 0.763  0.026   0.01  0.01  0.27  1.43    716  50.7
  760714       195   149  504  370  226    54 1.09   0.016   0.01  0.01  0.13  0.27    460  28.4
  760714       196   145  510  374  216   125 0.335  0.026   0.01  0.01  0.35  1.55    544  29.7
  760714       197   122  630  461  196    90 0.721  0.023   0.01  0.01  0.20  0.60    512  18.0
  760714       198   133  525  385  176    78 0.460  0.026   0.01  0.01  0.23  0.57    468  19.4
  760714       199   104  609  446  176    18 0.902  0.020   0.01  0.01  0.38  0.52    428  20.7
  760714       205   170  630  461  231    82 1.01   0.026   0.01  0.01  0.39  1.91    472  77.4
  760714       207    151 609 446 212    62 0.572 0.023   0.01 0.01 0.41 0.39   508 20.0
  760714       208    127 578 423 194    25 0.693 0.026   0.01 0.01 0.48 0.22   440 21.4
  760714       211    146 578 423 189    40 0.804 0.020   0.01 0.01 0.81 0.39   392 12.7
  760714       212    181 756 551 254    25 0.646 0.029   0.01 0.01 0.37 0.23   524 32.0
  760714       215    115 525 385 216    42 0.014 0.013   0.01 0.01 0.09 0.21   420 30.7
76JUL15   22
  760715       132    196 756 551 229    85 0.665 0.026   0.01 0.01 0.23 0.37   636 49.1
  760715       133    208 788 574 309    60 0.758 0.023   0.01 0.01 0.36 0.34   624 46.7
  760715       134    215 767 559 315    94 0.637 0.016   0.01 0.01 0.30 0.40   640 43.7
  760715       137    197 735 536 287    56 0.749 0.036   0.01 0.01 0.44 0.36   604 47.4
  760715       138    195 756 551 287    60 0.744 0.033   0.01 0.01 0.51 0.99   620 44.0
  760715       139    160 714 521 245    94 0.721 0.016   0.01 0.01 0.39 0.61   548 38.4
  760715       144    160 746 544 230    62 0.632 0.016   0.01 0.01 0.37 0.63   612 47.7
  760715       145    150 735 536 221    84 0.698 0.029   0.01 0.01 0.42 0.58   608 45.0
  760715       146    132 683 499 191    86 0.577 0.039   0.01 0.01 0.22 0.78   716 27.4
  760715       147    129 604 442 177    64 0.628 0.046   0.01 0.01 0.28 0.72   484 26.4
  760715       148    137 676 494 193    48 0.330 0.176   0.01 0.01 0.22 0.68   548 28.4
  760715       149    122 676 494 188    58 0.470 0.183   0.01 0.01 0.42 0.48   580 26.7
  760715       150    134 676 494 205    56 0.316 0.179   0.01 0.01 0.23 0.47   488 31.0
  760715       151    134 676 494 192    72 0.121 0.189   0.01 0.01 0.30 0.60   544 24.7
  760715       152    116 624 456 171    46 0.302 0.196   0.01 0.01 0.21 0.49   528 28.4
  760715       153    135 655 479 192    64 0.385 0.196   0.01 0.01 0.28 0.42   672 29.0
  760715       154    125 520 381 163    54 0.432 0.202   0.01 0.01 0.27 0.33   576 17.4
  760715       155    129 655 479 184    83 0.535 0.205   0.01 0.01 0.22 0.48   688 22.4
  760715       156    127 645 471 177    80 0.498 0.248   0.01 0.01 0.23 0.67   664 27.0
  760715       157    120 562 412 197    70 0.888 0.235   1.11 1.36 0.20 1.00   952 26.4
  760715       188    182 624 456 301    64 0.237 0.196   0.01 0.01 0.10 0.20   692 49.7
  760715       189    275 988 718 330    84 2.68  0.483   0.01 0.01 0.95 1.95   884 32.7
76JUL16   14
  760716       118    24716481193 250    65 2.35  0.796   0.01 0.10 0.72 0.98  1140 40.4
  760716       119    1861238 899 240    35 0.995 0.505   0.01 0.06 0.55 0.95   816 20.4
  760716       120    149 863 628 150    62 0.930 0.479   0.01 0.04 0.51 0.69   664  8.3
  760716       121    2051123 817 214    50 1.27  0.502   0.01 0.05 0.58 0.82   856  7.3
  760716       122    1881019 741 197    41 1.17  0.434   0.01 0.04 0.58 0.82   764  7.3
  760716       123    179 926 674 181    47 2.19  0.483   0.01 0.03 0.74 0.96   708  6.7
  760716       124    2331123 817 215    45 3.39  0.698   0.01 0.03 0.97 1.83   456  9.7
  760716       125    175 998 726 164    31 2.83  0.636   0.01 0.05 1.14 1.36   636 16.7
  760716       126    1761300 943 202    27 1.80  0.900   0.01 0.09 0.72 0.98   884 13.1
  760716       127    152 863 628 204    86 2.12  0.515   0.01 0.04 1.05 0.95   712 14.9
  760716       128    1761362 987 242    23 1.75  0.528   0.01 0.05 0.59 0.51   548 18.2
  760716       129    1761372 995 254    12 1.65  0.525   0.01 0.05 0.52 1.18   536 22.2
  760716       130    144 915 666 156    74 1.72  0.564   0.01 0.04 1.10 0.40   684  4.2
  760716       131    1931092 793 210    35 2.14  0.509   0.01 0.03 1.15 0.05   736  2.8
76JUL21    2
C 760721       132    22313941011 294    20 1.70  0.584   0.01 0.03 0.76 0.64   432 24.7
C 760721       190    2211040 755 274    44 0.153 0.346   0.01 0.02 0.36 0.54   648 37.1
76JUL23    2
C 760723       140    191 832 606 245    30 1.03  0.362   0.01 0.02 0.43 0.57   344 26.7
C 760723       155    142 666 487 179    87 0.595 0.349   0.01 0.02 0.30 0.50   404 19.4
76JUL26   30
  760726       113     95 530 389 115    88 0.935 0.395   0.01 0.03 0.87 1.63   352 18.7
  760726       114    124 915 666 159   140 1.04  0.457   0.01 0.03 1.03 2.67   600 24.2
  760726       115    44520381474 408    56 8.48  1.74    0.01 0.03 5.50 0.20  1208 29.0
  760726       116    29914461049 341    3811.82  1.679   5.82 1.36 0.62 3.98   924 66.7
  760726       117    30816541197 309    80 9.10  1.85    0.01 1.02 5.20 3.30   936 42.0
  760726       118    150 998 726 168    40 1.65  0.594   0.01 0.05 0.80 1.00   544 21.0
  760726       120    2231019 741 227    34 1.84  0.554   0.01 0.03 0.71 0.79   508 12.7
  760726       121    209 926 624 210    50 1.54  0.538   0.01 0.03 0.77 0.93   272 15.5
  760726       122    2341040 755 246    20 1.60  0.574   0.01 0.03 0.90 0.70   548 14.9
  760726       123    193 988 714 164    48 2.45  0.479   0.01 0.03 1.43 0.07   596 12.0
  760726       124    239 957 696 217    17 2.77  0.669   0.01 0.03 1.27 1.23   648 13.7
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 760726        126   137 728 531 133    74 1.74   0.212   0.01  0.01  1.06 0.34   620   7.8
 760726        127   120 686 501 110    94 2.02   0.196   0.01  0.01  1.43 0.07   356   7.2
 760725        128   120 707 516 125    70 0.800  0.111   0.01  0.01  0.70 0.30   540   8.0
 760726        129   169 979 712 177    53 1.25   0.114   0.01  0.01  0.92 0.38   728  24.2
 760726        130   141 499 366  99    50 1.11   0.157   0.01  0.01  1.23 0.17   436   3.1
 760726        131   131 728 531 251    10 0.874  0.176   0.01  0.01  0.77 0.13   444   4.2
 760726        171   220 603 441 283    18 0.116  0.016   0.01  0.01  0.04 0.36   476  19.8
 760726        172   199 520 381 242    13 0.195  0.020   0.01  0.01  0.24 0.26   420  16.5
 760726        173   194 416 307 172    48 0.112  0.016   0.01  0.01  0.23 0.27   416  14.0
 760726        174   150 520 381 263    26 0.260  0.016   0.01  0.01  0.55 0.05   444  17.1
 760726        175   199 489 359 225    20 0.549  0.020   0.01  0.01  0.34 0.26   372  13.9
 760726        178   175 406 299 173    27 0.451  0.020   0.01  0.01  0.30 0.70   312   9.9
 760726        179   149 510 374 251    14 0.419  0.020   0.01  0.01  0.48 0.02   296  12.5
 760726        181   196 416 307 187    46 0.326  0.016   0.01  0.01  0.59 0.01   268  11.6
 760726        183   154 510 374 247    43 0.102  0.016   0.01  0.01  0.19 0.11   316  20.8
 760726        184   177 426 314 173    40 0.163  0.016   0.01  0.01  0.15 0.25   292  17.0
 760726        185   141 432 318 179    75 0.205  0.016   0.01  0.01  0.44 0.06   368  17.1
 760726        186   128 432 318 165    26 0.432  0.016   0.01  0.01  0.24 0.26   344  10.1
 760726    1115207   274 352 260 118    58 0.405  0.059   0.37  0.31  0.42 1.68   384  33.2
76JUL27    11
 760727        132   142 767 559 239     9 1.57   0.349   0.01  0.01  1.44 0.06   400  16.2
 760727        133   201 659 481 213     9 1.46   0.349   0.01  0.01  1.30 0.10   376  13.4
 760727        134   189 788 574 249     9 1.60   0.342   0.01  0.01  1.29 0.21   476  17.1
 760727        135   206 859 625 350     4 0.056  0.013   0.01  0.03  0.02 0.18   612  70.9
 760727        136   252 731 533 274     7 0.098  0.013  11.34  1.08  0.02 0.48   448  31.8
 760727        137   196 741 541 287    18 0.977  0.124   0.04  0.01  0.49 0.11   520  29.9
 760727        138   216 756 551 268    14 1.01   0.104   0.01  0.01  0.53 0.17   444  28.9
 760727        139   224 637 466 228    15 0.888  0.052   0.01  0.01  0.51 0.09   468  30.5
 760727        140   197 647 473 202    21 0.721  0.049   0.01  0.01  0.58 0.12   420  22.8
 760727        190   179 647 473 124     5 0.084  0.020   0.01  0.01  0.37 0.23   372  19.4
 760727        216   155 770 561 336    38 0.251  0.016         1.08  0.03 0.97   576  33.8
76JUL29    35
 760729    0845135   142 626 458 334    17 0.034  0.007   0.34  0.13  0.03 0.47   656140.2
 760729    0845136   175 525 385 304    55 0.094  0.003  15.30  0.18  0.05 0.65   524  41.4
 760729    1250141   170 582 426 181    64 0.979  0.258   0.11  0.01  0.33 1.67   564  38.0
 760729    1300142   131 582 426 188    52 0.822  0.232   0.01  0.02  0.31 1.49   528  36.0
 760729    1305143   162 438 322 136    61 0.813  0.176   0.01  0.01  0.31 1.09   396  28.5
 760729    1435150   171 619 453 207    94 0.654  0.049   0.01  0.01  0.19 0.91   556  39.2
 760729    1430151    70 549 402 172    84 0.518  0.039   0.01  0.01  0.16 0.74   452  33.2
 760729    1420152   116 614 450 168   122 0.582  0.039   0.01  0.01  0.17 1.03   468  39.2
 760729    1415153   137 642 469 176    97 0.587  0.042   0.01  0.01  0.16 1.14   508  39.2
 760729    1405154   120 537 394 157   107 0.533  0.042   0.01  0.01  0.15 1.15   432  34.9
 760729    1535155   134 560 410 177   108 0.460  0.049   0.01  0.01  0.10 0.80   512  40.3
 760729    1525156   135 547 401 176   104 0.504  0.023   0.01  0.01  0.11 0.89   464  38.0
 760729    1515157    93 311 231 121   145 1.57   0.101   1.42  0.23  0.13 1.07   468  27.6
 760729    0920191   202 618 452 326   140 0.430  0.046   0.01  0.09  0.74 1.36   576  71.8
 760729    0935192    98 440 324 173    62 0.230  0.029   0.23  0.18  0.06 0.54   384  61.4
 760729    0945193   120 469 345 188   115 0.978  0.245   0.28  0.16  1.30 1.40   416  63.4
 760729    0950194   139 504 370 243   150 0.293  0.036   0.15  0.25  0.40 1.20   412  64.7
 760729    1005195   162 462 340 240    98 0.117  0.010   0.06  0.14  0.13 0.67   424  51.6
 760729    1010196   136 412 304 191   148 0.328  0.013   0.01  0.06  0.07 0.53   380  33.8
 760729    1020197   133 429 316 190    93 0.269  0.013   0.01  0.02  0.09 0.51   384  32.9
 760729    1025198   108 482 354 128   142 0.264  0.016   0.01  0.02  0.11 0.49   188  24.9
 760729    1030199   119 383 283 149    89 0.347  0.023   0.01  0.04  0.15 0.75   348  31.8
 760729    1330200   120 391 289 153    42 0.391  0.052   0.01  0.10  0.12 0.68   336  32.3
 760729    1330201   132 389 287 173    59 0.489  0.055   0.01  0.10  0.13 0.67   344  31.2
 760729    1140203   145 439 323 177   128 0.900  0.062   0.04  0.11  0.47 1.53   384  33.2
 760729    1130204   155 459 337 188   107 1.10   0.065   0.18  0.15  1.20 1.90   380  33.4
 760729    1120205   139 426 314 179    92 1.00   0.078   0.24  0.17  0.85 2.45   380  32.9
 760729    1230206   141 401 296 164    55 0.680  0.068   0.30  0.26  0.70 1.80   372  33.6
 760729    1225208   133 401 296 167   107 0.665  0.072   0.42  0.32  0.37 1.83   356  32.9
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   760729  1220209   142  410  302  170  155 0.665 0.065   0.43  0.32  0.30  1.80   352  32.5
   760729  1210210   130  360  266  144  110 0.416 0.052   0.20  0.23  0.20  1.00   312  30.3
   760729  1250211   124 .361  267  140   98 0.396 0.033   0.14  0.20  0.15  0.85   344  32.3
   760729  1040212   140  407  300  173   34 0.357 0.046   0.14  0.19  0.17  0.83   328  34.3
   760729  0845215   155  483  355  251   66 0.024 0.007   0.01  0.01  0.06  0.44   428  48.1
   760729  0845216   124  638  466  390   85 0.440 0.029  32.20  0.16  0.01  1.19   544  49.8
 76JUL30     6
   760730  1530144   157  665  486  192   58 0.802 0.072   0.23  0.01  0.20  1.30   500  43.8
   760730  1520145   150  660  482  181   79 0.597 0.049   0.01  0.01  0.15  1.15   532  41.6
   760730  1510146   188  690  504  211  125 0.929 0.052   0.01  0.01  0.07  1.13   556  38.9
   760730  1500147   177  683  499  212  114 0.983 0.059   0.01  0.01  0.08  1.12   548  38.0
   760730  1450148   177  676  494  213  131 0.963 0.059   0.01  0.01  0.08  1.12   488  39.8
   760730  1415149   178  658  481  218  105 1.06  0.075   0.01  0.02  0.11  1.29   528  36.9
 76AUG09    32
   760809  0930113   150  818  596  146  270 0.989 0.095   0.01  0.01  0.30  2.20   884  33.4
   760809  0940114   2071199  869  215   84 0.678 0.039   0.01  0.01  0.39  2.60   976. 18.2
   760809  0940115   51023981732  388  165 3.39  1.184   0.01  0.0118.1517.85  1720  60.1
   760809  1015116   24217881295  339   4211.43  2.120  15.70  0.89  0.73  4.57  1384  35.6
   760809  1025117   29016351185  315  115 6.80  1.206   1.39  0.61  5.19  3.41   828  70.4
   760809  1055118   27915121095  320   18 1.66  0.659   0.01  0.24  0.21  1.49  1108  34.3
   760809  1115119   1941242  901  219   32 0.872 0.173   0.01  0.02  0.21  0.99   516  23.1
   760809  1120120   2221328  963  257   34 0.955 0.235   0.01  0.01  0.13  0.97   920  22.0
   760809  1130121   2051296  941  243   90 1.27  0.241   0.01  0.01  0.23  0.97   968  22.9
   760809  1140122   1911296  941  234   40 0.900 0.166   0.08  0.01  0.24  0.86   840  20.0
   760809  1145123   2271350  979  264   20 1.59  0.476   0.01  0.01  0.33  1.57   912  20.0
   760809  1145124   2061080  785  228    8 2.08  0.717   0.01  0.04  0.30  1.40  1132  14.7
   760809  1205126   1701134  823  200   35 1.16  0.235   0.01  0.01  0.14  0.76   688  18.7
   760809  1220127   112  972  707  134  120 1.22  0.111   0.12  0.01  0.25  0.95   696  18.0
   760809  1220128   105  821  598  126   60 0.639 0.055   0.01  0.01  0.31  0.69   560  22.9
   760809  1220129   1441112  807  183   78 0.728 0.078   0.03  0.01  0.25  0.85   756  25.4
   760809  1320130    99  945  687  104  125 1.12  0.111   0.01  0.01  0.29  0.81   640  17.6
   760809  1330131   130  837  610  165   78 0.778 0.085   0.01  0.01  0.19  0.61   580  19.4
   760809  1620171   163  540  396  242   50 0.122 0.003   0.06  0.01  0.02  0.18   520  18.5
   760809  1615172   140  421  310  197  105 0.067 0.003   0.01  0.01  0.06  0.44   384  19.6
   760809  1610173   154  421  310  206  110 0.067 0.003   0.01  0.01  0.05  0.35   248  18.0
   760809  1605174   137  427  314  153   70 0.044 0.007   0.01  0.01  0.01  0.59   344  20.0
   760809  1455175   141  405  299  188   76 0.106 0.010   0.01  0.01  0.09  0.41   316  15.6
   760809  1450176   127  351  260  154   74 0.133 0.010   0.01  0.01  0.08  0.42   248  25.6
   760809  1510178   143  383  283  177   48 0.161 0.013   0.01  0.01  0.11  0.49   252  13.3
   760809  1515180   129  329  244  149   64 0.239 0.013   0.01  0.01  0.27  0.43   700   7.3
   760809  1520181   156  405  299  189   62 0.133 0.016   0.01  0.01  0.10  0.40   280  16.5
   760809  1535183   160  427  314  254   88 0.067 0.007   0.01  0.01  0.01  0.29   260  20.0
   760809  1540184   156  408  301  204  160 0.100 0.007   0.01  0.01  0.06  0.34   292  18.7
   760809  1545185   118  370  273  172   56 0.062 0.007   0.01  0.01  0.06  0.34   260  20.0
   760809  1545186   104  362  268  163   50 0.130 0.007   0.01  0.01  0.07  0.33   228  22.5
 C 760809  1330502   225  594  435  304   64 0.044 0.003   0.01  0.01  0.01  0.49   320  29.7
 76AUG10    34
   760810  1440132   178  654  478  251   74 0.652 0.036   0.05  0.01  0.09  0.41   552  37.0
   760810  1435133   168  600  439  233   78 0.640 0.026   0.01  0.01  0.07  0.43   540  32.7
   760810  1430134   172  665  486  243   84 0.621 0.026   0.01  0.01  0.07  0.43   636  38.4
   760810  1410137   195  818  598  278   36 0.709 0.108   0.01  0.01  0.11  0.69   608  34.7
   760810  1325138   197  818  598  266   54 0.690 0.059   0.01  0.01  0.14  0.46   608  34.3
   760810  1320139   152  665  488  200   94 0.684 0.019   0.01  0.01  0.11  1.09   528  29.1
   760810  1310140   184  828  606  237   20 0.966 0.212   0.01  0.01  0.18  0.62   612  30.9
   760810  1230141   176  796  580  240   25 0.596 0.078   0.01  0.01  0.16  0.54   552  32.0
   760810  1250142   151  687  502  198   30 0.577 0.055   0.01  0.01  0.15  0.75   544  26.0
   760810  1255143   160  818  596  218   64 0.044 0.033   0.01  0.01  0.14  0.26   568  30.9
   760810  1350188   166  632  462  245   38 0.075 0.003   0.01  0.01  0.03  1.77   524  29.4
   760810  1345189   240  687  502  261   62 3.17  0.476   0.01  0.01  0.31  1.59   592  36.7
   760810  1440190   180  763  484  272   64 0.358 0.010   0.01  0.01  0.12  0.78   636  36.0
   760810  0905191   256  763  556  367  160 0.376 0.007   0.01  0.01  0.12  1.28   656  42.7
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  760810 0920192  246 763 556 352 210 0.483 0.010  0.01 0.02 0.07 0.93   628 39.0
  760810 0930193  300 790 576 223  26 5.30  1.25   0.28 0.03 9.6010.50   536 38.4
  760810 0940194  137 458 337 224  50 0.151 0.010  0.06 0.04 0.09 1.01   420 27.1
  760810 0950195  128 425 313 188  88 0.176 0.029  0.02 0.01 0.13 0.87   456 24.7
  760810 1010196  129 425 313 214  66 0.678 0.003  0.01 0.01 0.06 1.14   428 22.9
  760810 1015197  136 458 337 185 100 0.268 0.013  0.01 0.01 0.12 0.78   428 20.7
  760810 1025198  126 545 399 187  72 0.573 0.010  0.01 0.01 0.14 0.86   440 18.5
  760810 1045199  143 452 332 161  26 0.578 0.082  0.03 0.01 0.26 0.84   284 18.0
  760810 1055200  181 676 494 257  19 0.431 0.095  0.01 0.01 0.12 0.88   484 39.0
  760810 1100201  194 763 556 283  24 0.420 0.078  0.01 0.01 0.18 1.22   492 45.7
  760810 1150203  177 567 415 205  54 0.410 0.023  0.01 0.01 1.57 3.63   548 22.5
  760810 1145204  162 469 345 185  22 0.368 0.026  0.04 0.01 0.48 2.32   404 20.0
  760810 1140205  153 458 337 195  24 0.284 0.026  0.06 0.01 0.35 2.25   404 18.7
  760810 1135206  150 545 399 173  26 0.205 0.013  0.01 0.01 0.17 1.03   448 20.7
  760810 1130207  154 978 711 193  34 0.111 0.010  0.02 0.02 0.06 1.74   416 22.7
  760810 1225208  150 516 380 174  30 0.310 0.016  0.02 0.01 0.12 0.98   460 24.2
  760810 1210211   90 365 270  20  56 0.231 0.007  0.01 0.01 0.06 0.74   308 15.1
  760810 1230212  160 709 517 211  22 0.710 0.091  0.01 0.01 0.18 0.72   500 31.6
  760810 1000215  162 600 439 269  49 0.105 0.003  0.01 0.01 0.06 0.24   540 32.3
C 760810 1500503  141 447 329 144  68 0.342 0.010  0.01 0.01 0.15 0.95   464  8.1
76AUG11   14
  760811 1245144  191 756 551 240  48 0.578 0.020  0.01 0.01 0.21 0.59   704 32.7
  760811 1235145  169 825 601 226  71 0.515 0.020  0.01 0.01 0.21 0.69   700 32.7
  760811 1225146  170 763 556 206 105 0.746 0.033  0.01 0.01 0.13 0.87   812 26.5
  760811 1220147  177 818 596 222  90 0.568 0.026  0.01 0.01 0.11 0.99   712 25.8
  760811 1215148  171 818 596 212  43 0.384 0.033  0.01 0.01 0.11 0.99   636 28.0
  760811 1210149  184 927 674 244  53 0.310 0.026  0.01 0.01 0.12 1.08   596 26.5
  760811 1110150  151 715 522 173  85 0.378 0.013  0.01 0.01 0.10 0.60   440 22.9
  760811 1100151  125 638 466 137  66 0.384 0.013  0.01 0.01 0.16 0.64   476 18.0
  760811 1050152  161 864 630 249  49 0.336 0.020  0.01 0.01 0.24 0.76   660 24.0
  760811 1045153  153 872 635 190  39 0.247 0.016  0.01 0.01 0.19 1.01   584 22.5
  760811 1035154  128 632 462 143  51 0.279 0.016  0.01 0.01 0.17 0.83   464 16.0
  760811 1010155  119 600 439 110 102 0.478 0.013  0.01 0.01 0.04 0.76   504 17.1
  760811 1000156  135 709 517 148  63 0.095 0.013  0.01 0.01 0.11 0.89   460 21.1
  760811 0945157  148 480 360 184  91 1.38  0.072  0.33 0.35 0.14 1.06   432 20.0
76AUG24   16
  760824 1610114  58424641780 035 17014.03  3.15   0.01 0.0122.0512.95  1888 68.7
  760824 1610115  48521341543 280 190 6.75  1.43   0.01 0.0111.3513.65  1428 57.4
  760824 1600116  26919801435 345  3412.78  2.71   9.39 0.31 1.68 5.12  1380102.8
  760824 1550117  37521801576 313 185 7.33  1.48   2.28 1.32 1.88 4.22  1588120.8
  760824 1530118  258 19621419 301  59 1.05  0.111  0.03 0.01 0.32 1.38  1360 94.8
  760824 1515122  27618001303 201 210 5.03  0.789  0.01 0.01 0.67 2.63   824  5.1
  760824 1345171  208 534 391 272  43 0.140 0.003  0.01 0.01 0.07 0.23   484 37.4
  760824 1340172  174 927 674 194  96 0.125 0.003  0.01 0.01 0.08 0.22   516 28.5
  760824 1330173  194 414 305 222  99 0.073 0.003  0.01 0.01 0.09 0.21   476 31.4
  760824 1215174  161 382 282 179  40 0.109 0.003  0.01 0.01 0.15 0.35   416 26.5
  760824 1245181  181 462 340 199  43 0.166 0.016  0.01 0.01 0.27 1.23   404 27.6
  760824 1255183  173 462 340 237  80 0.192 0.003  0.05 0.01 0.06 0.14   396 45.8
  760824 1300184  181 447 329 234  66 0.125 0.003  0.01 0.01 0.05 0.25   420 42.5
  760824 1300185  145 398 294 182  66 0.052 0.003  0.01 0.01 0.10 0.20   368 36.5
  760824 1305186  138 365 270 156  26 0.130 0.007  0.01 0.01 0.10 0.60   312 26.2
C 760824 1435504  267 702 512 357  27 0.047 0.003  0.01 0.01 0.01 0.29   532 88.1
76AUG25   28
  760825 1420132  265 785 572 358  58 0.637 0.042  0.01 0.01 0.09 0.31   604 90.1
  760825 1415133  265 748 546 355  54 0.621 0.039  0.01 0.01 0.09 0.41   560 88.1
  760825 1415134  276 818 596 362  62 0.663 0.055  0.01 0.01 0.08 0.22   572 88.8
  760825 1400137  266 818 596 347  38 0.611 0.068  0.01 0.01 0.13 0.57   600 77.4
  760825 1320138  234 709 517 289  60 0.611 0.049  0.01 0.01 0.17 0.43   516 75.1
  760825 1315139  263 785 572 325  27 0.653 0.085  0.02 0.01 0.18 0.52   540 81.4
  760825 1305140  251 763 556 294  20 0.984 0.284  0.02 0.01 0.14 0.86   512 70.1
  760825 1225141  186 600 439 217  19 0.879 0.202  0.03 0.01 0.12 0.58   464 58.7
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   760825  1155142   221  709  517  265   14 0.874  0.212   0.08 0.01 0.13 0.67  484  64.4
   760825  1150143   270  804  636  235   12 0.763  0.091   0.05 0.01 0.11 0.69  588  76.1
   760825  1130144   222  741  541  327   21 0.600  0.176   0.05 0.01 0.12 0.68  424  62.7
   760825  1120145   220  756  551  259   20 0.521  0.108   0.02 0.01 0.13 0.57  504  61.4
   760825  1105146   197  825  601  228  175 0.942  0.036   0.02 0.01 0.11 1.09  888  54.1
   760825  1100147   224  981  713  271  139 0.626  0.039   0.02 0.01 0.09 1.21  884  59.3
   760825  1055148   2271090  791  260  108 0.489  0.042   0.01 0.01 0.08 1.32  924  56.1
   760825  1050149   200  959  697  252   68 0.411  0.033   0.01 0.01 0.06 1.04  840  56.1
   760825  1000150   2141068  775  285  141 0.784  0.023   0.01 0.01 0.09 1.01 1156  57.4
   760825  0955151   165  825  601  196   42 0.289  0.026   0.07 0.01 0.12 0.78  752  38.5
   760825  0950152   180  902  656  213   27 0.205  0.020   0.03 0.01 0.10 1.00  728  34.3
   760825  0945153   193  880  641  220   25 0.553  0.059   0.04 0.01 0.12 0.88  680  33.1
   760825  0930154   2011003  729  231   29 0.600  0.072   0.03 0.01 0.08 1.22 2744  32.9
   760825  0910155   169  715  522  230   92 0.347  0.068   0.02 0.01 0.09 0.91  648  36.5
   760825  0900156   141  693  506  203  104 0.400  0.013   0.04 0.01 0.04 1.16  552  29.6
   760825  0850157   137  605  443  200   92 1.02   0.147   0.56 0.09 0.33 0.97  556  46.7
   760825  1455188   185  528  387  282   41 0.024  0.055   0.04 0.01 0.12 0.38  516  67.4
   760825  1450189   28516061163  410  154 1.09   0.082   0.04 0.01 0.02 2.45 1180  88.1
   760825  1420190   2731110  807  345   55 0.174  0.010   0.03 0.01 0.07 1.13  684  46.5
   760825  1225212   239  825  601  302   19 0.868  0.170   0.03 0.01 0.12 0.78  580  69.1
76AUG26      2
   760826  1600191   232  770  561  341  105 0.563  0.036   0.03 0.01 0.18 2.62  644  74.1
   760826  1545215   168  660  482  256   49 0.024  0.007   0.05 0.01 0.02 0.48  484  48.1
76AUG31      1
   760831  1330220   209  990  721  253  104 0.384  0.013   0.03 0.01 0.12 1.38  680  34.3
76SEP10     20
   760910  1235114   45621491555  362  220 8.57   2.05    0.01 0.0411.1211.88 1908  72.1
   760910  1235115   43313901007  404   91 8.59   1.97    0.01 0.0111.1527.85 1312  77.1
   760910  1220116   43426501915  365   86 4.83   2.64    4.41 0.3811.8512.15 2572114.1
   760910  1210117   3161281  931  379  108 6.15   1.43    0.39 0.24 6.18 5.32 1136  88.8
   760910  1150118   2001216  883  261   33 2.79   0.463   0.01 0.02 0.22 1.68  832  51.6
   760910  1135119   2011370  993  299   35 1.74   0.333   0.01 0.02 0.29 1.21 1008  84.8
   760910  1130120   1951352  981  309   25 1.98   0.391   0.01 0.03 0.24 1.26 1020  95.4
   760910  1005121   22015341111  344   33 2.31   0.470   0.02 0.10 0.30 1.40 1504101.4
   760910  1000122   22514721067  353   29 2.54   0.492   0.05 0.11 0.30 1.70 1108102.1
   760910  0955123   23216381187  359   41 2.95   0.626   0.13 0.16 0.47 2.13 1136108.1
   760910  0955124   32915881151  362   28 2.78   0.584   0.17 0.17 0.40 1.90 1152108.8
   760910  0945125   33119071381  395   42 3.16   0.607   0.30 0.21 0.50 2.00 1336128.1
   760910  0940126   23618601347  396   41 3.27   0.636   0.29 0.19 0.55 1.85 1368138.8
   760910  1015127   23720001447  440   50 3.76   0.783   0.39 0.20 0.79 3.01 1464155.5
   760910  1020128   1591230  893  307  14510.53   1.41    0.50 0.39 4.56 1.44  816101.4
   760910  1015129   21017221247  396   69 4.30   0.949   0.56 0.23 2.21 3.79 1184140.2
   760910  1120130   20319681423  444  115 4.68   1.04    0.56 0.24 3.58 4.32 1252151.5
   760910  1110131   19820301468  460  105 4.02   1.16    0.76 0.29 4.47 8.03 1296179.1
 C 760910  1045505   23320111453  452   95 4.02   1.05    0.76 0.35 5.00 5.00 1332156.2
 C 760910  1100506   23620421477  496   95 3.65   1.02    0.82 0.38 4.30 5.20 1424189.1
76SEP16     16
   760916  1335127   1761089  791  245   43 2.80   0.571   0.36 0.16 0.49 1.81  680  78.8
   760916  1335128    96  541  397  150  250 3.28   0.421   1.17 0.21 1.08 1.72  456  45.8
   760916  1335129   133  861  627  199  152 3.09   0.489   0.80 0.19 0.74 1.56  560  59.4
   760916  1125130   1371024  745  209  108 4.26   0.691   0.64 0.15 2.45 2.15  656  64.7
   760916  1130131   1481024  745  227  105 3.91   0.779   0.59 0.15 2.82 2.78  644  71.4
   760916  1225132   1511152  837  295   70 3.54   0.574   0.67 0.17 2.59 2.91  792  90.1
   760916  1225133   1411125  817  287   86 3.18   0.535   0.66 0.17 2.40 2.60  792  91.4
   760916  1220134   133  969  705  249   81 2.21   0.473   0.51 0.14 1.76 2.54  668  86.8
   760916  1210137   168  961  699  317  120 2.86   0.430   0.18 0.21 0.73 4.27  668101.4
   760916  1100138   226  726  530  324   44 0.637  0.085   0.01 0.03 0.08 0.72  492  86.1
   760916  1055139   224  738  538  330   28 0.780  0.085   0.01 0.03 0.09 0.51  472  86.1
   760916  1045140   230  813  592  346   41 0.708  0.088   0.01 0.02 0.09 0.51  488  93.4
 C 760916  1135507   1521188  863  244   92 4.09   0.779   0.66 0.18 2.99 2.81  692  81.4
 C 760916  1140508   1561181  859  287   69 4.15   0.851   0.77 0.20 3.31 3.39  792  84.8
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C 760916  1405509   106 736 537 226 205 2.69   0.346   1.79 0.33 1.09 1.91   532 60.1
C 760916  1425510   126 931 677 291 136 2.97   0.424   2.52 0.55 1.71 1.99   780 67.4
76SEP17   18
   760917 1315141   174 978 711 315  33 0.717 0.147   0.08 0.11 0.19 0.91   684 78.8
   760917 1310142   165 986 717 267  44 0.686 0.127   0.04 0.10 0.22 0.98   664 78.8
   760917 1305143   168 969 705 251  37 0.613 0.134   0.03 0.09 0.16 0.84   648 79.4
   760917 1245144   174 998 726 273  41 0.644 0.130   0.03 0.10 0.18 0.92   576 80.8
   760917 1225145   1681006 731 257  44 0.675 0.124   0.01 0.09 0.17 0.83   744 77.4
   760917 1210146   1701032 751 286  88 1.10  0.121   0.13 0.13 0.27 1.43   740 83.4
   760917 1155147   1651053 765 282 105 1.19  0.121   0.14 0.13 0.33 1.67   772 86.1
   760917 1135148   1711080 785 306 135 1.23  0.134   0.14 0.13 0.36 1.54   756 88.8
   760917 1020149   1801062 771 308  91 1.07  0.150   0.12 0.12 0.33 1.67   764 91.4
   760917 1045150   1811003 729 314  86 1.05  0.117   0.08 0.10 0.23 1.57   760 97.4
   760917 1100151   179 965 702 301  95 1.17  0.082   0.05 0.08 0.19 1.61   796 98.1
   760917 0945152   201 978 711 328  52 0.707 0.078   0.01 0.05 0.19 1.31   716101.4
   760917 0940153   188 971 706 297  55 0.810 0.072   0.01 0.03 0.35 1.15   720100.1
   760917 0900154   197 920 669 317  49 0.665 0.059   0.01 0.01 0.18 1.12   584 95.4
   760917 0830155   210 870 633 328  89 0.592 0.033   0.02 0.01 0.11 0.69   608 95.4
   760917 0820156   209 907 660 323  88 0.572 0.033   0.01 0.01 0.08 0.72   608 98.1
   760917 0810157   166 702 512 249  68 0.738 0.222   1.00 0.24 0.38 1.62   508 78.8
   760917 0810220   204 878 639 329  71 0.468 0.029   0.01 0.01 0.07 1.39   700102.1
76OCT05   28
   761005 1405114   52125811707 397 164 9.69   3.380   0.01 0.04 8.5027.00  1800124.1
   761005 1400115   549241511160 365 16613.66  3.590   0.01 0.0119.4029.60  1644104.8
   761005 1350116   22917921297 361  44 8.96   2.250  10.07 0.37 4.16 2.44  1176120.8
   761005 1345117   38924571777 407 135 7.90   1.92    0.88 0.3210.5610.94  1644116.8
   761005 1310118   30619951446 376  26 2.60   0.704   0.15 0.20 0.18 1.62   876101.4
   761005 1255120   26517671297 344 125 0.675  0.082   0.01 0.17 1.07 2.73  1208 92.1
   761005 1250122   27818401331 369  74 0.727  0.082   0.01 0.18 0.64 2.36  1176 92.1
   761005 1245123   30820131456 379 170 4.04   0.616   0.01 0.07 2.65 3.55  1372 90.1
   761005 1245124   31619551415 383 105 2.18   0.607   0.01 0.24 2.88 3.62  1320 90.8
   761005 1225127   20419101383 313  89 0.641  0.075   0.01 0.01 0.31 1.79  1124 93.4
   761005 1225129   20216781215 332  62 0.623  0.049   0.01 0.01 0.15 1.25  1092 98.1
   761005 1150130   23016391194 301 310 1.70   0.153   0.01 0.06 0.54 2.46  1064 82.8
   761005 1145131   20215121095 298  59 0.875  0.104   0.01 0.01 0.26 1.44   948105.4
   761005 1115132   254 868 632 374  51 0.588  0.036   0.01 0.01 0.06 0.24   628100.8
   761005 1110133   251 928 675 367  63 0.913  0.036   0.01 0.01 0.05 0.25   684102.8
   761005 1110134   275 957 696 393  46 0.688  0.039   0.01 0.01 0.05 0.25   608106.1
   761005 1055137   212 848 618 329  63 0.638  0.029   0.01 0.01 0.07 0.33   468100.1
   761005 1510140   2621024 745 376  21 1.19   0.179   0.01 0.01 0.12 0.78   756102.8
   761005 1450153   18511501079 306  64 0.388  0.010   0.01 0.01 0.06 0.74   808 98.1
   761005 1435155   1801140 827 322 125 0.481  0.007   0.01 0.01 0.05 0.75   928106.1
   761005 0935171   201 706 515 316  65 0.263  0.003   0.01 0.01 0.01 0.29   572 41.8
   761005 0925173   188 546 400 251  99 0.200  0.003   0.01 0.01 0.01 0.39   440 42.3
   761005 0915174   171 581 425 254  71 0.288  0.003   0.01 0.01 0.07 0.43   476 44.7
   761005 0900175   184 624 456 299  49 0.463  0.016   0.01 0.01 0.05 0.55   580 64.7
   761005 1000184   181 668 488 270 108 0.394  0.003   0.01 0.01 0.05 0.35   488 49.2
   761005 1015186   180 455 335 215  78 0.413  0.007   0.01 0.01 0.07 0.63   348 49.7
   761005 1035189   130 990 721 406 120 4.63   0.551   0.01 0.07 0.73 2.67   432133.5
   761005 1115190   3061024 745 374  36 1.17   0.111   0.01 0.01 0.08 1.22   736138.2
76OCT06   37
   761006 1540118   230 896 652 251  43 3.88   0.571   0.29 0.24 1.93 3.17   668 52.4
   761006 1530119   160 924 672 233  55 4.06   0.538   0.05 0.17 1.15 2.85   680 51.4
   761006 1525120   1561097 797 236  52 3.69   0.633   0.03 0.17 1.42 2.98   740 53.4
   761006 1520121   1771114 809 248  61 4.19   0.695   0.05 0.20 1.67 3.13   756 61.7
   761006 1515122   1791064 773 236  59 4.31   0.685   0.05 0.20 1.56 2.94   740 63.1
   761006 1510123   2041297 941 274  55 4.06   0.688   0.07 0.22 1.51 3.29   536 69.1
   761006 1510124   2061230 893 272  41 4.31   0.704   0.08 0.23 1.50 3.40   936 68.7
   761006 1500125   24514301037 316  54 4.13   0.616   0.03 0.26 0.83 2.77  1020 74.7
   761006 1455126   22814301037 295  62 3.56   0.489   0.01 0.21 0.54 2.36  1144 71.1
   761006 1450127   2311363 989 289  67 3.25   0.375   0.01 0.13 0.40 2.10  1048 68.1
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 761006  1450128   1821188  863  244  155  3.94    1.13    0.32  0.25  4.61  3.89   916  64.7
 761006  1450129   1951221  887  246  168  3.25    1.02    0.24  0.22  4.08  4.22   944  69.1
 761006  1415138   193  878  639  292   88  1.37    0.127   0.01  0.08  0.27  2.13   688  75.4
 761006  1410139   186  844  615  284   66  1.22    0.085   0.01  0.07  0.19  1.41   636  77.8
 761006  1335140   194  743  542  287   72  1.17    0.075   0.01  0.05  0.09  1.01   916  74.1
 761006  1340141   184  743  542  279   66  0.629   0.062   0.01  0.06  0.09  0.71   540  75.4
 761006  1335142   150  776  566  317   65  0.594   0.068   0.01  0.07  0.09  0.81   624  88.8
 761006  1330143   175  652  476  289   58  0.617   0.062   0.01  0.07  0.09  0.81   596  90.8
 761006  1200144   208  726  530  244   35  0.531   0.059   0.01  0.01  0.18  0.72   624  88.8
 761006  1145145   195  825  601  275   49  0.703   0.078   0.01  0.01  0.16  0.64   600  88.1
 761006  1140146   203  858  625  293   95  2.40    0.235   0.20  0.30  0.34  2.16   664  90.1
 761006  1135147   201  813  592  282  115  2.25    0.307   0.40  0.31  0.49  3.11   740  87.4
 761006  1130148   210  924  672  300  168  1.35    0.121   0.06  0.26  0.23  2.07   644  93.4
 761006  1125149   2041031  751  303  136  1.04    0.098   0.01  0.26  0.20  1.70   764  90.1
 761006  1030150   199  898  654  297   72  0.634   0.055   0.01  0.01  0.13  2.37   664  87.4
 761006  1020151   197  998  726  285   67  0.486   0.049   0.01  0.01  0.12  0.78   716  86.8
 761006  1010152   180  924  672  273   62  0.583   0.033   0.01  0.01  0.13  1.17   676  82.8
 761006  1005153   181  938  682  279   64  0.400   0.029   0.01  0.01  0.13  0.97   684  85.4
 761006  0955154   169  889  647  272   43  0.262   0.029   0.01  0.01  0.14  0.86   676  80.8
 761006  0920155   169  921  670  271   96  0.298   0.023   0.01  0.01  0.13  1.07   732  86.8
 761006  0915156   1851056  767  293   83  0.308   0.026   0.01  0.01  0.11  1.09   700  86.1
 761006  0905157   181  672  491  243   89  0.847   0.085   0.76  0.66  0.14  2.06   560  66.1
 761006  1340212   136  906  660  400  108  0.565   0.072   0.01  0.28  0.16  1.54   684182.4
 761006  0910220   1701000  727  286   74  0.287   0.013   0.01  0.01  0.04  1.06   708  89.4
,C 761006  1555511   108 672 490  145  119 3.08    0.470   0.22 0.50 0.51  2.79   544  39.
C 761006  1600512   106  557  408  133  128  2.62    0.326   0.48  0.50  0.43  2.97   448  40.7
C 761006  1605513   194  744  543  191  158  2.57    0.561   1.51  0.47  1.50  5.10   624  60.1
760CT26   43
 761026        114  38625651855 482   86  9.18    2.64    0.02  0.0220.3810.12  1688106.8
 761026        115  38522401621 490   7210.62     2.38    0.02  0.0119.8211.68  1472126.1
 761026        116  19920241465 554   36  8.35    2.47   17.80  0.30  5.41  5.59  1392124.8
 761026        117  29521701570 510  172  6.65    1.79    5.10  0.2912.88  5.12  1512111.5
 761026        118  27518181315 370   31  2.53    0.776   1.71  0.23  7.46  4.54  1236102.1
 761026        119  22816691209 360   42  1.15    0.267   1.49  0.25  2.60  2.50   976  93.4
 761026        120  21516801217 341   55  0.998   0.179   1.52  0.26  1.97  2.33  1064  95.4
 761026        121  22416101167 352  156  1.03    0.153   1.33  0.23  2.22  2.08  1136  94.8
 761026        122  20215401115 322  137  0.967   0.121   1.27  0.23  1.95  2.55  1108  92.1
 761026        123  21415871151 336  132  1.30    0.212   1.07  0.21  2.64  2.16  1128  92.8
 761026        124  22616221175 346  118  1.56    0.293   1.18  0.27  3.74  2.46  1156  91.4
 761026        125  21016691209 356   72  0.441   0.218   1.29  0.22  1.98  3.22  1048  92.8
 761026        126  19716331183 314   68  1.06    0.157   1.43  0.19  2.26  1.94  1136  92.1
 761026        127  19415621131 301   83  1.02    0.157   1.24  0.15  1.97  1.93  1120  98.8
 761026        128  1461314  953 248  171  1.81    0.430   2.24  0.18  3.97  2.33   796  82.1
 761026        129  18114561055 284  152  1.07    0.218   1.60  0.15  2.72  1.88   948  88.1
 761026        130  20415621131 310  194  1.37    0.246   1.19  0.23  3.35  1.95  1152  98.1
 761026        131  19715981157 303  116  1.21    0.258   1.03  0.17  2.89  3.51  1120  98.8
 761026        132  1951264  917 325  177  0.441   0.026   0.36  0.10  1.23  1.27   956102.8
 761026        133  1841207  877 326  112  0.506   0.036   0.28  0.08  0.94  1.26   956107.5
 761026        134  1871215  883 338  130  0.420   0.072   0.32  0.09  1.07  1.03   920103.4
 761026        137  21813801001 334   77  0.461   0.049   0.33  0.11  0.23  2.87   908106.8
 761026        138  21214001015 364   75  0.749   0.036   0.34  0.11  1.75  1.45  1276107.5
 761026        139  2041365  991 344   88  0.395   0.078   0.34  0.11  1.57  1.23   784101.4
 761026        140  20015181099 371   49  0.506   0.046   0.40  0.13  1.66  1.44   992106.1
 761026        141  20915401115 376   84  0.471   0.036   0.39  0.14  1.51  1.49   832106.1
 761026        142  19214001015 358   78  0.430   0.052   0.40  0.12  1.24  1.26   916106.1
 761026        143  19014491051 369   84  0.425   0.052   0.43  0.12  1.25  1.45   892104.8
 761026        144  19414151027 372   74  0.314   0.026   0.46  0.13  1.18  1.22   856110.1
 761026        145  19314631061 395   96  0.309   0.020   0.48  0.12  0.91  1.29   732107.5
 761026        146  1811297  941 358   92  0.339   0.016   0.43  0.10  0.50  0.90   832102.8
 761026        147  1721224  889 352  116  0.344   0.020   0.38  0.09  0.32  0.98   772101.4
 761026        148  1811208  877 360   94  0.349   0.013   0.33  0.08  0.21  0.99   700104.8
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  761026      149   1941173  853  364    75 0.289 0.016   0.31 0.06 0.17 0.93   752104.8
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  761026      151   1841148  833  362    75 0.284 0.026   0.25 0.05 0.14 0.76   624102.8
  761026      152   1861173  853  366    87 0.284 0.020   0.22 0.05 0.11 0.89   872104.8
  761026      153   1911208  877  366    82 0.268 0.020   0.22 0.05 0.10 0.90   916106.8
  761026      154   1891224  889  367    74 0.430 0.016   0.23 0.05 0.12 0.88   876106.1
  761026      155   1891297  941  379   103 0.380 0.020   0.20 0.05 0.12 0.88   964106.1
  761026      156   1921320  957  381    92 0.294 0.016   0.18 0.05 0.09 0.99   904108.8
  761026      157   163  648  474  260    34 0.912 0.163   1.28 0.14 0.60 0.90   532 61.4
  761026      220   1951297  957  393    96 0.314 0.020   0.19 0.04 0.08 1.02   936106.8
76NOV01   42
  761101      171   199  748  546  395    96 0.156 0.010   0.11 0.01 0.04 0.36   584 62.1
  761101      172   177  632  462  347   111 0.101 0.007   0.01 0.01 0.09 0.31   516 67.4
  761101      173   152  601  440  293   116 0.055 0.010   0.01 0.01 0.14 0.36   496 61.1
  761101      174   172  618  452  327   108 0.055 0.007   0.01 0.01 0.10 0.40   452 61.7
  761101      175   169  601  440  311    66 0.105 0.013   0.01 0.01 0.09 0.41   472 56.7
  761101      176   161  568  416  292    58 0.229 0.033   0.01 0.01 0.12 0.58   400 57.4
  761101      177   173  589  431  306    43 0.230 0.046   0.01 0.01 0.09 0.51   444 58.4
  761101      178   181  616  451  323    55 0.330 0.072   0.01 0.01 0.10 0.50   836 57.1
  761101      179   187  624  456  330    44 0.335 0.085   0.01 0.01 0.09 0.51   448 57.1
  761101      181   154  570  417  297    38 0.307 0.072   0.01 0.01 0.10 0.70   352 59.1
  761101      182   157  579  424  301    86 0.298 0.059   0.01 0.01 0.10 0.60   516 57.4
  761101      183   159  581  425  305   105 0.170 0.026   0.01 0.01 0.10 0.50   440 57.7
  761101      184   174  599  438  319    51 0.133 0.026   0.01 0.01 0.10 0.50   428 59.1
  761101      185   135  540  396  277    92 0.138 0.020   0.01 0.01 0.11 0.59   448 58.4
  761101      186   175  575  421  312   485 0.857 0.016   0.01 0.01 0.13 0.77   592 61.1
  761101      187   131  813  592  260    93 0.193 0.153   0.40 0.15 0.23 0.77   552 65.1
  761101      188   120  861  627  281   123 0.092 0.007   0.13 0.10 0.10 0.80   516 67.7
  761101      189   17715001087  422   210 3.76  0.538   0.01 0.01 0.61 1.39   560 93.4
  761101      190   1751056  767  356    64 1.02  0.254   0.01 0.01 0.21 1.09   740 74.1
  761101      191   2721280  929  502    61 1.87  0.548   0.01 0.02 7.00  .    1316102.8
  761101      192   160  878  639  362    64 0.128 0.020   0.01 0.01 0.13  .     616 65.7
  761101      193   156  768  560  356    59 1.27  0.470   0.01 0.01 3.87 2.73   520 73
  761101      194   119  672  491  300    72 0.123 0.016   0.85 0.09 0.20 0.70   776 69.4
  761101      195   135  627  458  300   146 0.220 0.007   0.80 0.08 0.12 0.48   408 67.1
  761101      196   170  762  556  353    67 0.344 0.065   0.19 0.05 0.59 0.61   548 74.1
  761101      197   154  719  525  284   191 0.403 0.016   0.25 0.06 0.26 0.94   560 69.4
  761101      198   135  738  538  296   164 0.293 0.016   0.28 0.06 0.27 0.83   568 67.7
  761101      199   158  744  540  321   101 0.481 0.059   0.20 0.06 1.27 1.13   492 67.7
  761101      200   155  780  569  329   124 0.339 0.036   0.26 0.05 0.73 0.97   812 75.7
  761101      201   156  759  553  335   146 0.413 0.042   0.25 0.05 0.74 0.96   792 74.7
  761101      202   159  792  577  332    99 0.220 0.033   0.30 0.05 0.62 0.88   676 72.7
  761101      203   120  748  546  286    84 0.220 0.013   0.33 0.06 0.64 1.16   656 72.4
  761101      204   145  813  592  326    68 0.183 0.016   0.43 0.07 0.85 0.95   608 78.1
  761101      205   134  781  569  314    84 0.202 0.023   0.47 0.07 0.92 1.28   584 75.4
  761101      206   135  813  592  313    88 0.215 0.016   0.55 0.08 0.96 1.14   632 78.8
  761101      207   160  868  632  347    74 0.229 0.020   0.85 0.08 0.99 1.51   676 74.1
  761101      208   165  840  612  335    59 0.197 0.020   0.92 0.08 1.02 1.58   672 80.4
  761101      209   155  840  612  343    71 0.156 0.020   0.94 0.08 1.05 1.55   660 76.1
  761101      210    94  861  627  346    93 0.197 0.023   1.03 0.08 1.07 1.73   680 80.8
  761101      211    98  861  627  334    81 0.197 0.020   0.94 0.07 0.95 1.65   688 80.8
  761101      212   161  861  627  350    79 0.073 0.016   0.71 0.06 0.71 1.69   688102.8
  761101      215   152  707  516  345    91 0.202 0.007   0.12 0.01 0.05 0.35   580 80.8
76NOV22   42
  761122      114   64623462056  370 46031.12 11.90     0.01 0.0346.3 21.7   1800136.8
  761122      115   53325571846  290 47024.54  8.58     0.01 0.0230.8 23.2   1628134.6
  761122      116   40122901438  340 15012.17  4.99     3.91 1.9516.0 16.5   1520161.3
  761122      117   41123861723  336 15010.17  3.52     0.06 0.1020.8 13.2   1576144.6
  761122      118   37320761501  368    62 6.79  2.15     0.65 0.0514.7  8.8   1344133.5
  761122      119   32720541486  346    31 1.99  0.724    1.87 0.08 7.46 1.54   1280125.7
  761122      120   30019051377  318    26 1.84  0.574    1.67 0.09 5.87 5.13   1228123.5
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   761122       121  2982129 1540 352   64 1.40  0.382   1.86 0.10 6.17 4.83 1368133.5
   761122       122  2822061 1492 354   78 1.29  0.316   1.87 0.11 5.43 5.57 1308130.1
   761122       123  2912115 1531 336  310 1.40  0.287   1.54 0.07 6.58 4.42 1476132.4
   761122       124  3062161 1561 344  195 1.61  0.323   1.69 0.10 7.29 4.71 1392132.4
   761122       126  2612033 1471 324  174 0.794 0.101   2.21 0.05 3.86 3.64 1308126.8
   761122       127  2442022 1462 324  135 0.511 0.046   2.03 0.06 2.98 3.32 1352125.7
   761122       128  3472889 2086 430   91 5.23  1.70    2.59 0.0714.7  8.3  1900137.9
   761122       129  3192493 1801 388   72 2.30  0.949   2.31 0.07 8.27 4.73 1552139.0
   761122       130  2942568 1855 370  205 1.85  0.688   2.35 0.09 8.39 4.61 1732134.6
   761122       131  2192515 1816 376  151 1.69  0.528   2.21 0.09 7.55 4.45 1692139.0
   761122       132  1971509 1093 316   86 0.171 0.026   0.73 0.04 1.58 2.22 1032122.4
   761122       133  1991348  977 290   96 0.217 0.013   0.53 0.03 1.16 1.84  920119.0
   761122       134  2081380 1001 306   99 0.171 0.007   0.60 0.03 1.35 1.75  828116.8
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   761122       141  2101357  985 322   52 0.106 0.003   0.47 0.03 0.25 1.05  948122.4
   761122       142  2041313  951 312   74 0.182 0.010   0.47 0.03 0.44 1.26  904122.4
   761122       143  2041283  931 322   64 0.160 0.010   0.45 0.02 0.33 1.07  924125.7
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   761122       146  1961311  951 313   94 0.165 0.007   0.44 0.02 0.23 0.87  940127.9
   761122       147  2041339  971 326   64 0.194 0.010   0.44 0.02 0.41 1.19  924132.4
   761122       148  1971327  963 330   71 0.147 0.007   0.45 0.03 0.29 1.01  936133.5
   761122       149  2041330  965 328   49 0.100 0.003   0.40 0.02 0.07 0.83  956132.4
   761122       150  2081327  961 325   41 0.082 0.003   0.31 0.02 0.01 0.69  928133.5
   761122       151  1871290  935 314   66 0.059 0.003   0.28 0.02 0.01 0.69  936129.0
   761122       152  2001323  961 334   52 0.094 0.003   0.09 0.01 0.01 0.69  944132.4
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   761122       156  1961352  981 330   55 0.106 0.003   0.01 0.02 0.03 0.77  960127.9
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77FEB08   01
C 770208  1130516    208  950  691 231   26 1.34  0.33    1.50 0.01 5.95 1.40  676 84.1
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   770212 1520123  2821697 1229 275   66 3.08  0.83    0.45 0.20 0.40 0.25 1048 78.1
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   770215 1315120    103  490  360  84  215 4.38  1.71    2.13 0.62 0.50 1.50  432 31.0
   770215 1330123    109  603  441 144  200 3.51  0.86    4.36 0.39 8.15 7.35  560 38.7
   770215 1130140    2451080  785 426   85 0.394 0.02    0.75 0.05 3.68 1.57  872136.8
   770215 1100152    230  101   80 243  150 3.98  1.26    1.63 0.72 0.20 2.65  752 88.8
   770215 1045155    2611153  837 305  105 1.71  0.51    1.67 0.23 0.20 1.55  880 97.4
   770215 1605171     88  373  276  83  160 3.31  0.99    3.21 0.24 7.1911.3   340 29.7
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C 770215 1340517    101  484  355  99  375 4.57  1.13    2.80 0.43 8.9811.02  460 33.4
C 770215 1340518    100  473  348  92  360 4.56  1.22    2.58 0.55 9.2513.25  476 33.0
C 770215 1415519     89  369  273  60  185 2.96  2.04    1.92 0.76 9.3113.44  336 21.7
C 770215 1445520    104  446  328  96  320 2.46  1.27    2.70 0.48 9.4111.6   472 30.0
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   770221 1645174    123  456  335 113   48 1.88  0.49    1.29 0.34 4.78 3.17  380 43.4
   770221 1630177    131  487  358 138   48 1.87  0.46    1.14 0.44 5.07 3.08  412 51.4
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  770222 1710109    56  185  140   30  452 5.34   1.73   1.20 0.30 5.39 2.65   420  11.9
  770222 1700113    62  232  174   30  388 4.62   1.58   0.98 0.15 5.40 3.20   352  14.0
  770222 1900118    85  366  271   57  390 3.19   1.13   0.70 0.10 6.21 2.49   436  23.1
  770222 1815140   124  508  373  102   80 2.21   0.57   0.39 0.03 5.15 2.20   412  36.7
  770222 1825153    39  176  134   27   76 2.25   0.44   0.88 0.01 1.05 2.30   172  15.6
  770222 1830155   162  682  498  165   80 1.53   0.25   0.58 0.10 5.10 2.15   524  64.7
  770222 1735160    37  141  109   24  190 1.17   0.23   1.39 0.04 1.35 1.55   164  10.1
  770222 1745165    48  170  129    26+500 2.55   0.88   1.17 0.08 3.39 2.35   436  12.6
  770222 1750170    48  181  137    24+500 2.46   0.95   0.94 0.16 3.80 2.45   352   8.7
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  770222 1805193    28  131  101   16  450 1.31   0.04   1.12 0.08 0.65 1.25   252   8.9
  770222 1755213    52  204  154   39  390 1.79   0.31   1.68 0.22 1.56 1.84   312  14.2
C 770222 1730521    59  207  156   33  460 4.61   1.61   1.62 0.18 4.45 2.00   348  12.6
77FEB23  18
  770223 1155102    22   83   67    6  120 2.30   0.69   0.53 0.02 1.12 1.13   124   5.3
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  770223 1145107    49  178  135   15  130 6.16   2.69   0.41 0.14 5.70 2.70   164   7.8
  770223 1310122    71  269  201   39  121 3.08   1.09   1.16 0.14 4.81 1.90   244  18.4
  770223 1315127    73  294  219   44  200 2.99   0.85   1.21 0.09 4.60 2.10   320  20.0
  770223 1315128    94  353  261   61  130 2.37   0.53   0.29 0.61 6.40 8.70   316  20.2
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  770223 1010153   110  417  307   87  110 2.07   0.78   0.92 0.23 5.11 2.10   324  30.8
  770223 1440155A   94  393  290   77  290 2.27   0.49   1.32 0.28 4.02 3.55   508  20.4
  770223 1000155B  102  414  305   81  165 2.91   0.85   1.09 0.16 5.20 7.6    328  29.4
  770223 1205160    39  100   79   21  350 1.01   0.21   0.99 0.01 0.82 1.98   208   4.9
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  770223 1120213    57  184  139   39  175 1.23   0.20   2.38 0.05 0.91 2.30   240  14.0
C 770223 1155522    49  174  132    21+500 4.07   0.88   1.77 0.18 3.15 1.20   484  11.1
C 770223 1305523    72  282  210   36  170 3.20   0.70   1.56 0.14 4.45 1.10   280  18.2
C 770223 1305524    70  281  209   24  180 3.43   0.13   1.29 0.06 4.18 1.00   272  18.8
77FEB24  04
  770224 1020155    66  248  186   36  250 1.41   0.12   2.42 0.04 1.67 3.23   292  19.1
  770224 0940214    42  216  163   39  156 1.17   0.18   3.57 0.06 1.29 2.36   236  16.0
C 770224 0930525    47  225  169    30+500 2.07   0.86   5.63 0.05 1.50 2.35   472  16.6
C 770224 1040526   106  485  356   87  180 3.49   0.07   6.33 0.33 3.80 5.15   480  29.4
77FEB25  04
  770225 1030140    79  324  240   66  110 1.41   0.15   4.02 0.10 1.50 2.85   300  24.4
  770225 1130174    82  352  260  120   95 0.522  0.13   5.01 0.09 1.50 2.40   332  28.8
  770225 1120177    79  327  242  105  105 0.744  0.07   5.05 0.10 1.15 1.90   316  27.6
  770225 1200186    78  333  247   57  105 0.444  0.03   4.57 0.04 1.15 2.25   308  26.8
77MAR14  55
  770314 1735104   107  593  434  249   23 0.763  0.03   7.64 0.16 0.60 2.25   444  61.1
  770314 1730105   115  541  397  194   40 0.611  0.11   7.24 0.15 0.90 2.00   492  71.4
  770314 1725106   113  550  403  219   39 0.433  0.01   7.49 0.19 0.80 2.50   504  71.4
  770314 1725108    99  315  234   72   26 0.363  0.06   2.76 0.01 0.20 2.40   248  37.4
  770314 1725109   110  578  423  204   18 0.838  0.05   6.39 0.17 0.90 2.60   424  12.7
  770314 1720110   110  582  426  162   25 0.913  0.04   9.90 0.10 1.00 2.55   452  62.1
  770314 1715111   110  629  460  183   30 0.838  0.03   8.86 0.16 1.40 2.95   464  65.1
  770314 1710112   112  616  451  228   42 0.813  0.02   8.70 0.22 1.15 2.85   468  60.1
  770314 1710113    96  563  412  132   54 0.913  0.01   7.42 0.13 0.99 2.91   452  55.4
  770314 1645114   109  605  443  177   52 0.663  0.06   7.25 0.20 0.89 2.51   452  50.4
  770314 1640115   115  616  451  228   68 1.01   0.24   7.09 0.26 1.35 2.65   484  55.7
  770314 1630116   138  642  469  183   46 1.56   0.24   6.49 0.17 2.88 3.72   520  59.4
  770314 1620117   135  725  529  216   56 1.46   0.15   5.46 0.22 3.11 3.69   520  56.7
  770314 1605118   133  718  524  237   76 1.33   0.02   5.15 0.24 2.98 3.67   504  57.4
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   770314  1550119   127  690  504  171    92  0.888  0.08     5.56  0.12  2.25  2.90    520  59.7
   770314  1545120   247  759  553  237    63  0.963  0.05     4.78  0.22  2.49  2.91    540  58.1
   770314  1540121   367  593  434  222    95  0.988  0.02     5.37  0.22  2.42  2.68    516  59.7
   770314  1535122   125  531  389  150    72  0.838  0.05     5.07  0.12  1.98  2.72    416  45.7
   770314  1525123   139  664  485  231   100  0.950  0.03     6.07  0.20  2.45  4.30    512  55.7
   770314  1525124   123  569  417  204    80  0.850  0.03     5.12  0.17  2.20  2.65    452  53.4
   770314  1520125   122  665  486  171   104  0.825  0.01     6.34  0.13  2.32  3.68    516  51.4
   770314  1515126   131  647  473  213    92  0.738  0.02     6.51  0.17  2.20  2.45    504  53.4
   770314  1505127   12   770314  1300140   114  524  384  195   95 0.676  0.14      4.56  0.11
   770314  1210141   111  595  435  231    65  0.649  0.15     6.37  0.15  1.25  1.95    520  52.7
   770314  1205142    84  533  391  180   118  0.568  0.10     5.64  0.13  1.00  1.75    472  53.7
   770314  1200143   134  613  448  249    70  0.500  0.10     6.07  0.14  1.05  1.65    464  50.1
   770314  1135144   123  587  430  240    70  0.541  0.06     6.27  0.13  1.00  1.90    484  54.4
   770314  1125145   110  581  425  225    95  0.541  0.13     6.28  0.14  0.99  1.66    488  56.7
   770314  1120146   126  587  430  243   111  0.568  0.12     6.38  0.14  0.95  1.65    476  55.4
   770314  1115147   132  610  446  225    93  0.649  0.05     6.09  0.13  1.00  1.75    480  52.1
   770314  1110148   129  587  430  249    68  0.662  0.10     6.18  0.14  0.95  2.70    472  55.4
   770314  1100149   136  627  458  255    83  0.541  0.12     6.18  0.14  0.95  1.85    456  52.1
   770314  1005150   124  594  435  246    86  0.608  0.16     6.30  0.14  0.92  1.73    476  55.7
   770314  0955151   113  571  418  234    86  0.608  0.08     6.20  0.15  0.90  1.60    448  53.1
   770314  0945152   120  588  429  249    65  0.554  0.05     6.15  0.15  0.80  1.50    464  52.1
   770314  0940153   135  588  429  230    80  0.500  0.08     5.62  0.13  0.82  1.58    464  54.1
   770314  0935154   124  589  431  248    62  0.446  0.09     5.13  0.15  0.83  1.67    468  53.4
   770314  0915155   113  558  409  227   100  0.487  0.06     6.25  0.15  0.80  1.50    436  55.4
   770314  0910156   119  566  415  231    80  0.487  0.03     6.08  0.14  0.78  1.42    428  52.4
   770314  0900157   108  420  309  167    88  0.851  0.20     3.72  0.08  0.60  1.75    348  37.4
   770314  1340216    93  650  475  315    25  0.149  0.02     9.54  0.01  0.10  0.55    528  66.1
   770314  0905220   109  526  386  213    73  0.608  0.13     6.26  0.14  0.80  1.65    412  49.4
77MAR04     1
C 770304   1435165    43  231  173   57   500  3.99   1.43     6.69  0.01  0.01  1.39    784  14.4
77MAR15    31
   770315  1500158   112  331  245  170    25  0.18   0.01     4.32  0.08  3.55  0.45    332  42.9
   770315  1440162   136  514  377  273    14  0.54   0.20     5.83  0.17  0.25  1.55    496  68.4
   770315  1435163   171  843  614  348    21  0.94   0.57     7.50  0.50  0.80  2.45    680  77.8
   770315  1430164   158  818  596  360    25  0.68   0.30     5.99  0.01  2.45  0.20    688  77.1
   770315  1425165   157  672  491  300    17  0.65   0.27     5.34  0.01  2.30  0.10    632  76.4
   770315  1415166   152  652  476  294    41  0.47   0.09     4.78  0.02  2.05  0.35    652  74.1
   770315  1410167   176  691  505  346    38  0.36   0.03     4.14  0.01  1.70  0.45    604  76.1
   770315  1405168   162  640  468  297    23  0.36   0.01     4.19  0.01  1.20  0.45    568  67.4
   770315  1325169   151  651  476  291    32  0.49   0.03     3.94  0.06  1.25  0.25    560  70.7
   770315  1325170   150  652  476  291    42  0.46   0.04     3.89  0.01  0.95  0.65    568  69.1
   770315  1215171   145  616  451  300    58  0.34   0.02     7.31  0.04  0.50  0.35    560  62.4
   770315  1210172   115  430  317  201    33  0.24   0.01     5.69  0.01  0.35  0.15    380  41.1
   770315  1205173   156  601  440  303    38  0.28   0.01     6.54  0.06  0.43  0.42    440  67.1
   770315  1200174   150  612  448  300    44  0.19   0.01     6.17  0.03  0.60  0.20    460  63.1
   770315  1055175   142  623  456  300    48  0.30   0.02     6.49  0.01  0.40  0.75    472  65.4
   770315  1050176   143  588  430  294    76  0.21   0.02     6.24  0.06  0.25  0.75    496  59.4
   770315  1045177   134  581  425  291    40  0.18   0.01     6.27  0.03  0.19  0.71    480  65.4
   770315  1040178   135  564  413  285    77  0.23   0.01     6.29  0.11  0.10  0.80    472  66.1
   770315  1035179   136  574  420  285    92  0.30   0.01     5.94  0.06  0.18  0.72    468  65.1
   770315  1030180   132  576  422  279    78  0.20   0.02     6.06  0.04  0.12  0.68    432  66.7
   770315  1025181   133  572  419  282    54  0.16   0.01     5.79  0.01  0.10  0.40    420  63.7
   770315  1020182   141  606  443  297    46  0.17   0.01     5.99  0.01  0.25  0.25    460  61.1
   770315  1015183   135  559  409  285    44  0.16   0.01     5.89  0.01  0.25  0.15    444  58.7
   770315  1010184   132  553  405  285    68  0.19   0.02     5.89  0.01  0.18  0.27    444  62.1
   770315  1005185   118  532  390  255    92  0.17   0.01     5.88  0.02  0.09  0.36    444  60.1
   770315  1000186   146  521  382  258    80  0.17   0.02     5.19  0.01  0.09  0.51    400  58.7
   770315  0940187   129  545  399  279    42  0.09   0.02     5.98  0.02  0.17  0.33    404  58.1
   770315  0935188   145  564  413  294    64  0.19   0.02     6.08  0.02  0.10  0.40    440  60.1
   770315  0925189   130  572  419  273    84  0.19   0.02     5.99  0.01  0.20  0.35    460  59.4
   770315  0910190   141  538  394  258   115  0.25   0.02     4.89  0.01  0.15  0.30    336  54.4
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C 770315  1320213   102 531 389 276   51 0.24   0.03    10.21 0.09 0.15 0.45   204 54.4
77MAR16   24
   770316 1425191   139 548 402 249   95 0.28   0.01     3.59 0.01 0.21 0.39   496 52.5
   770316 1410192   142 561 411 261   45 0.09   0.04     2.99 0.01 0.15 0.25   460 51.6
   770316 1400193   144 583 430 264   40 0.41   0.02     3.48 0.02 0.75 0.20   508 60.8
   770316 1350194   127 613 448 255   44 0.04   0.02     3.29 0.01 0.10 0.70   564 63.8
   770316 1335195   114 489 359 225   62 0.09   0.01     3.58 0.02 0.10 0.30   284 57.2
   770316 1205196   139 549 402 258   82 0.13   0.01     3.79 0.01 0.07 0.23   408 58.2
   770316 1200197   159 570 417 276   40 0.12   0.02     3.79 0.01 0.07 0.28   424 58.9
   770316 1150198   153 559 409 270   60 0.19   0.02     3.89 0.01 0.19 0.21   408 56.8
   770316 1145199   157 584 427 249   68 0.35   0.03     4.32 0.08 0.12 0.58   236 59.2
   770316 1135200   127 519 381 255   64 0.29   0.02     5.18 0.02 0.17 0.73   456 58.5
   770316 1130201   136 574 420 264   34 0.19   0.01     5.18 0.02 0.11 0.49   216 62.6
   770316 1125202   137 562 412 258   74 0.20   0.01     4.89 0.01 0.11 0.44   300 57.5
   770316 1045203   130 541 397 252   93 0.25   0.02     4.95 0.05 0.22 0.53   468 57.5
   770316 1040204   142 567 415 279   54 0.23   0.02     5.16 0.04 0.29 0.36   460 59.2
   770316 1035205   147 532 390 282   65 0.20   0.02     5.02 0.08 0.25 0.40   464 59.8
   770316 1030206   135 544 399 269   50 0.16   0.02     5.47 0.03 0.35 0.55   468 60.1
   770316 1025207   131 543 398 261   62 0.21   0.02     5.54 0.06 0.35 0.60   444 59.5
   770316 1020208   131 557 408 264   44 0.23   0.02     5.45 0.05 0.50 0.15   464 60.1
   770316 1015209   135 522 383 264   63 0.20   0.02     5.38 0.02 0.25 0.20   436 57.8
   770316 1010210   124 518 360 261   66 0.17   0.02     5.38 0.02 0.20 0.35   484 59.8
   770316 1005211   132 532 390 273   56 0.15   0.01     5.39 0.01 0.20 0.30   428 59.5
   770316 0955212   117 527 386 192   54 0.16   0.02     5.49 0.01 0.25 0.15   512 66.5
   770316 1430214   106 433 319 201   15 0.13   0.02     4.79 0.01 0.25 0.30   368 46.8
C  770316 1320215   133 575 421 276   60 0.07   0.02     3.29 0.01 0.25 0.10   484 70.1
77MAR29   54
   770329 1420158    33 214 187  84   49 0.361  0.097    9.85 0.02 0.17 0.78   168 22.1
C  770329 1405162    71 296 220 155   54 0.742  0.205    9.15 0.01 0.15 0.65   204 30.0
   770329 1400163    74 361 267 172   95 0.839  0.171   10.63 0.02 0.18 0.62   244 38.6
   770329 1355164    75 364 269 179   92 0.871  0.227   11.54 0.02 0.20 0.50   160 39.7
   770329 1340165    74 369 273 179   80 0.948  0.240   11.68 0.40 0.20 0.85   156 38.8
   770329 1335166    80 369 273 184   81 0.897  0.205   11.41 0.02 0.17 0.63   220 38.0
   770329 1330167    78 332 246 183   91 0.961  0.251   11.21 0.03 0.23 0.47   140 39.0
   770329 1325168    79 363 268 181  118 0.942  0.308   10.89 0.02 0.30 0.50   156 35.7
   770329 1220169    72 367 271 167  188 1.065  0.411   10.09 0.04 0.40 0.45   172 36.6
   770329 1220170    81 343 254 176  167 1.052  0.194    9.98 0.02 0.16 0.69   300 37.3
   770329 1200171    80 376 278 196  252 1.207  0.251   12.25 0.03 0.25 0.50   324 36.6
   770329 1155172    85 396 292 205  295 1.148  0.297   12.12 0.03 0.30 0.55   328 38.4
   770329 1150173    83 369 273 202  300 1.077  0.331   12.37 0.04 0.35 0.45   320 36.8
   770329 1145174    83 374 276 199  275 1.226  0.205   12.26 0.02 0.23 0.57   240 38.4
   770329 1055175    82 377 278 196  260 1.155  0.251   12.26 0.02 0.25 0.65   180 37.0
   770329 1050176    83 391 289 197  242 1.239  0.217   12.13 0.02 0.25 0.50   120 37.3
   770329 1045177    82 371 274 200  272 1.265  0.283   12.04 0.04 0.34 0.46   164 36.6
   770329 1040178    81 335 248 200  355 1.284  0.411   12.01 0.14 0.45 0.40   204 37.0
   770329 1035179    82 373 276 200  268 0.968  0.228   12.24 0.04 0.25 0.43   236 37.0
   770329 1030180    82 382 282 202  339 1.774  0.342   12.24 0.04 0.37 0.63   240 37.0
   770329 1025181    79 341 253 199  355 1.245  0.274   12.24 0.04 0.29 0.51   304 36.2
   770329 1020182    87 397 293 215  288 1.077  0.246    9.26 0.04 0.28 0.47   268 36.4
   770329 1015183    92 415 306 221  240 1.129  0.160    9.17 0.03 0.18 0.52   296 36.6
   770329 1010184    87 406 299 215  310 1.123  0.228    9.26 0.04 0.30 0.40   316 35.5
   770329 1005185    88 366 271 219  310 1.097  0.251    9.12 0.08 0.33 0.65   292 35.5
   770329 1000186    87 389 287 212  308 1.166  0.205    9.26 0.04 0.25 0.50   248 35.2
   770329  940187    91 407 300 221  241 1.136  0.217    9.26 0.04 0.25 0.55   288 35.6
   770329  935188    94 408 301 224  282 1.097  0.183    9.37 0.03 0.25 0.50   216 35.9
   770329  930189    93 423 312 225  360 1.136  0.297    9.67 0.03 0.34 0.51   132 35.9
   770329  920190    93 423 312 230  358 1.100  0.217   10.17 0.03 0.30 0.50   228 36.4
   770329 1710191    85 313 232 173  106 0.477  0.091   10.44 0.02 0.15 0.65   232 30.5
   770329 1705192    80 340 252 182  117 0.516  0.091   10.31 0.02 0.14 0.46   260 34.4
   770329 1700193    78 338 250 182  147 0.151  0.089   10.37 0.02 0.22 0.43   300 34.8
   770329 1655194    86 376 278 194  102 0.128  0.069   10.37 0.02 0.19 0.36   256 34.4
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  770329  1645195     95  404  298  224   95  0.115  0.046  12.13  0.02  0.10  0.50   280  33.4
  770329  1640196     95  391  289  227  115  0.134  0.057  12.32  0.02  0.15  0.30   232  33.9
  770329  1635197     98  409  301  233  165  0.177  0.091   8.98  0.02  0.15  0.35   220  34.6
  770329  1630198     91  385  284  222  175  0.188  0.046   8.98  0.02  0.11  0.39   212  35.0
  770329  1625199     92  405  299  230  166  0.179  0.069   9.77  0.03  0.11  0.44   284  30.0
  770329  1620200     90  434  319  254  156  0.179  0.069  11.17  0.03  0.11  0.54   184  31.9
  770329  1615201     96  465  340  263  140  0.180  0.103  11.38  0.02  0.12  0.53   312  31.6
  770329  1610202     94  455  335  260  157  0.197  0.080  11.17  0.03  0.10  0.65   324  32.0
  770329  1545203    100  480  353  267  126  0.167  0.091  11.17  0.03  0.15  0.45   464  31.3
  770329  1540204     89  441  325  251  128  0.160  0.069  10.99  0.01  0.11  0.44   464  32.5
  770329  1535205     90  454  334  251  139  0.186  0.114  11.58  0.02  0.12  0.58   528  30.5
  770329  1530206     89  431  317  249  169  0.180  0.114  11.57  0.03  0.15  0.50   468  32.5
  770329  1525207     66  426  314  218  170  0.175  0.103   0.00  0.07  0.13  0.42   508  31.7
  770329  1520208     90  462  340  248  127  0.147  0.069  11.67  0.03  0.20  0.50   508  30.5
  770329  1515209     95  469  345  270  140  0.219  0.080  11.78  0.02  0.15  0.45   924  30.4
  770329  1510210     75  427  314  224  186  0.182  0.091  10.77  0.03  0.12  0.53  1332  32.5
  770329  1505211     95  472  347  266  112  0.205  0.091  11.57  0.03  0.12  0.48   456  31.7
  770329  1500212     94  463  346  255  180  0.182  0.103  11.57  0.03  0.13  0.52   552  31.7
C 770329  1210213     76  400  295  206  355  0.260  0.194   9.27  0.03  0.23  0.52   528  32.8
  770329  1720214     63  295  219  143   91  0.115  0.069   9.08  0.02  0.13  0.57   256  25.9
77MAR30   30
  770330  1225130    121  686  501  202   62  0.112  0.069  11.18  0.02  0.15  0.30   440  40.5
  770330  1220131    105  686  501  210   75  0.095  0.045  11.49  0.01  0.08  0.42   444  41.7
  770330  1205132    119  551  404  230   64  0.106  0.057  10.98  0.02  0.09  0.56   436  41.7
  770330  1200133    119  493  363  226   64  0.123  0.046  10.58  0.02  0.10  0.40   420  41.6
  770330  1155134    120  489  359  228   80  0.104  0.057  10.58  0.02  0.10  0.57   440  41.2
  770330  1150135    117  779  566  345   18  0.017  0.002  24.60  0.03  0.03  0.37   540  66.4
  770330  1145136     88  513  376  225   19  0.033  0.025  13.69  0.01  0.05  0.30   440  34.6
  770330  1135137    104  506  371  265  102  0.110  0.020  10.58  0.02  0.05  0.40   416  41.7
  770330  1105138    115  491  361  228   81  0.119  0.025  10.58  0.02  0.15  0.40   346  40.9
  770330  1100139    118  474  350  230   85  0.134  0.025  10.38  0.02  0.09  0.46   364  36.8
  770330  1055140    101  493  363  284  142  0.162  0.082  10.68  0.02  0.15  0.40   423  43.1
  770330  1045141    100  508  373  278  114  0.140  0.041  10.58  0.02  0.15  0.35   380  42.1
  770330  1040142    109  508  373  221   90  0.199  0.041  10.58  0.02  0.12  0.38   368  40.8
  770330  1035143     84  435  320  254  162  0.108  0.065  10.68  0.02  0.15  0.35   388  47.8
  770330  1010144    104  510  374  221   94  0.130  0.033  10.88  0.02  0.10  0.40   400  40.3
  770330  1000145     99  490  360  284  108  0.140  0.049  10.78  0.02  0.15  0.40   416  39.9
  770330   955146    110  577  379  225  133  0.162  0.033  10.78  0.02  0.20  0.43   416  39.4
  770330   950147    109  472  347  221  156  0.171  0.057  10.78  0.02  0.19  0.31   388  40.9
  770330   945148    109  460  338  225  144  0.186  0.049  10.98  0.02  0.20  0.35   340  40.2
  770330   940149    108  488  358  221  126  0.164  0.041  10.88  0.02  0.15  0.36   348  41.2
  770330   935150     90  447  329  269  180  0.164  0.041  10.98  0.02  0.15  0.55   304  40.9
  770330   930151     99  476  350  283  156  0.179  0.049  10.98  0.02  0.13  0.42   388  43.1
  770330   845152     84  452  332  254  198  0.199  0.082  11.07  0.03  0.18  0.52   828  40.3
  770330   840153    103  475  349  283  127  0.162  0.049  10.78  0.02  0.10  0.60   928  39.0
  770330   835154    100  509  373  262  135  0.171  0.089  10.78  0.02  0.20  0.40   788  40.0
  770330  1525155     96  397  293  228  124  0.365  0.277   8.85  0.05  0.50  0.40   820  30.7
  770330  1510156    108  458  337  284  178  0.199  0.106  10.38  0.02  0.25  0.55   860  37.5
  770330  1505157     94  383  283  212  500  0.480  0.326   5.85  0.05  0.85  0.20   730  34.4
C 770330  1140216     76  516  378  244   28  0.097  0.020   8.39  0.01  0.35  0.31   460  54.2
  770330  1515220     91  447  329  239  245  0.214  0.130   8.57  0.03  0.60  0.35   636  59.1
77APR02   25
  770402  1130104     68  306  229  152  346  0.626  0.538   5.95  0.05  0.55  0.65   640  30.3
  770402  1120105     73  314  233  158  348  0.747  0.505   5.55  0.05  0.50  0.75   680  30.3
  770402  1120106     70  307  228  152  346  0.700  0.579   5.55  0.05  0.60  0.75   640  29.4
  770402  1120108     47  200  151   84  205  0.326  0.236   1.36  0.04  0.45  0.70   520  20.4
  770402  1120109     66  291  219  137  330  0.648  0.514   4.75  0.05  0.55  0.75   648  26.9
  770402  1115110     69  290  216  143  357  0.637  0.546   4.76  0.04  0.95  0.15   560  27.1
  770402  1110111     70  315  235  143  335  0.508  0.438   4.53  0.07  0.70  0.60   532  29.1
  770402  1105112     70  285  212  143  420  0.477  0.454   4.64  0.06  0.67  0.63   564  20.0
  770402  1055113     69  291  214  139  500  0.661  0.595   4.33  0.07  0.78  0.47   600  26.9
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    770402  1050114    40 282 210 137 500 0.795 0.701   4.12 0.08
    770402  1050115    69 278 207 136 500 0.765 0.538   4.34 0.06 0.95 0.40  596 25.8
    770402  1040116    76 301 224 146 500 0.933 0.734   4.53 0.08 0.70 0.43  584 25.6
    770402  1035117    76 299 222 148 500 0.949 0.734   4.22 0.08 0.98 0.17  608 28.0
    770402  1025118    78 292 217 148 500 0.989 0.766   3.91 0.04 1.10 0.15  596 25.3
    770402  1015119    83 303 255 154 500 0.875 0.766   3.70 0.1  0.00 0.00  544 25.1
    770402  1010120    84 296 220 161 500 0.855 0.604   3.68 0.12 0.00 0.00  596 25.3
    770402  1010121    93 315 234 170 500 0.858 0.606   3.58 0.12 0.00 0.00  604 26.1
    770402  1005122    64 339 257 158 500 0.866 0.678   3.60 0.1  0.00 0.00  640 25.3
    770402  1000123    87 320 230 167 500 0.924 0.368   3.74 0.18 0.00 0.00  632 31.6
    770402  1000124    87 307 228 188 500 0.966 0.325   3.65 0.13 0.00 0.00  660 26.3
    770402   955125    91 331 245 169 500 0.997 0.368   3.73 0.17 0.00 0.00  644 24.3
    770402  0950126    42 311 231 152 500 1.937 0.450   4.05 0.03 0.00 0.00  740 24.8
    770402   935127   107 396 292 212 500 1.195 0.285   4.40 0.20 0.34 0.76  788 33.2
    770402   930128   112 372 276 206 500 0.431 0.342   4.65 0.03 0.00 0.00 1020 27.9
    770402   930129   110 374 272 215 500 0.873 0.205   4.65 0.15 0.00 0.00  560 25.8
  C 770402  1240215    77 287 214 149 500 0.338 0.271   2.72 0.08 0.00 0.00  864 28.6
    770402  1235221    32 254 190 136 500 0.647 0.030   2.58 0.02 0.00 0.00  540 24.3
77APR04       1                                                   0.13 0.57  480 28.7
C 770404    1650162   129 407 300 147 500 2.77  0.14    0.73 0.02
77APR13      53                                                   0.45 0.95 1504 42.2
    770413  1735104    38 442 325 249  65 0.156 0.04    6.84 0.20
    770413  1730105    42 497 365 266  96 0.126 0.04    7.78 0.28 0.90 0.30  392 74.7
    770413  1725106    95 501 363 247  82 0.106 0.016   7.68 0.02 0.56 0.74  448 82.1
    770413  1725108    93 372 275 227  31 0.066 0.033   2.19 0.03 0.10 0.80  276 77.3
    770413  1725109    32 431 317 239  75 0.084 0.03    6.76 0.21 0.05 0.00  220 52.4
    770413  1715110    39 423 312 233  52 0.143 0.03    6.11 0.13 0.22 0.78  396 76.1
    770413  1710111    81 692 505 284  27 0.057 0.016   4.92 0.18 0.22 0.58  392 78.7
    770413  1705112    90 818 596 230  34 0.081 0.160   4.78 0.02 0.13 0.42  476 72.8
    770413  1645113   100 511 375 278  27 0.088 0.025   3.79 0.02 0.15 0.55  612 73.5
    770413  1640114   109 723 528 228  24 0.066 0.016   3.79 0.01 0.09 0.46  528 68.1
    770413  1635115   133 764 557 262  39 0.233 0.147   4.60 0.20 0.07 0.48  544 67.3
    770413  1630116   169 895 651 281  56 0.451 0.293   2.78 0.30 0.50 1.40  636 68.8
    770413  1620117   174 895 651 285  56 0.480 0.277   3.14 0.02 3.00 0.30  700 66.7
    770413  1605118   124 839 611 244  56 0.229 0.082   2.98 0.05 2.80 0.46  444 70.5
    770413  1550119   148 802 584 246  36 0.222 0.114   2.59 0.02 0.10 0.80  672 65.9
    770413  1545120   140 770 561 248  46 0.194 0.082   2.69 0.01 0.07 0.42  556 63.2
    770413  1540121   137 750 547 235  52 0.173 0.049   2.69 0.01 0.06 0.49  580 62.8
    770413  1515122   131 748 546 235  50 0.141 0.049   2.99 0.01 0.09 0.41  408 60.4
    770413  1510123   159 765 558 271  52 0.191 0.065   2.99 0.01 0.15 0.23  476 60.4
    770413  1500124   154 775 565 262  44 0.176 0.065   2.97 0.01 0.20 0.45  636 64.0
    770413  1455125   134 762 556 244  40 0.132 0.033   3.79 0.03 0.13 0.52  648 58.8
    770413  1450126   140 795 549 253  31 0.086 0.033   4.48 0.01 0.05 0.70  528 59.5
    770413  1435127   123 745 543 239  56 0.079 0.025   4.79 0.02 0.10 0.40  526 59.8
    770413  1430128   129 839 611 239  51 0.185 0.082   6.06 0.01 0.07 0.28  576 60.1
    770413  1430129   130 762 556 239  35 0.154 0.033   5.28 0.04 0.15 0.56  568 54.9
    770413  1425130   114 753 549 225  52 0.101 0.033   5.89 0.02 0.07 0.33  524 55.9
    770413  1420131   107 737 538 225  44 0.106 0.033   6.19 0.01 0.07 0.43  556 57.6
    770413  1355132   118 608 445 235  28 0.057 0.016   5.08 0.01 0.15 0.30  652 56.6
    770413  1350133   112 590 432 230  40 0.075 0.033   5.09 0.02 0.07 0.43  576 58.2
    770413  1345134   104 663 484 281  29 0.073 0.025   5.09 0.01 0.08 0.32  488 58.8
    770413  1330137   115 556 407 232  29 0.031 0.016   5.08 0.01 0.09 0.31  292 58.5
    770413  1220138   129 609 446 244  64 0.088 0.033   5.18 0.02 0.06 0.34  176 60.8
    770413  1215139   125 554 406 244  54 0.053 0.016   4.99 0.02 0.19 0.16  252 59.8
    770413  1210140   132 617 451 253  62 0.066 0.016   5.09 0.01 0.05 0.35  496 57.8
    770413  1205141    50 622 455 275  62 0.055 0.020   5.17 0.11 0.05 0.20  432 58.2
    770413  1205142   133 623 456 253  46 0.062 0.016   5.29 0.13 0.09 0.31  476 70.1
    770413  1200143   132 609 446 251  35 0.059 0.008   5.29 0.01 0.05 0.20  646 56.9
    770413  1130144   118 546 400 235  80 0.079 0.016   5.38 0.01 0.05 0.35  512 61.7
    770413  1120145   138 622 455 267  38 0.022 0.016   5.38 0.02 0.12 0.23  500 56.6
    770413  1115146   134 599 438 258 114 0.112 0.016   5.39 0.01 0.09 0.21  476 58.5
                                                        5.58 0.02 0.05 0.30  576 59.5
  770413 1110147   130 558 409 253 154 0.100 0.025   5.58 0.02 0.07 0.23   492 59.5
  770413 1050148   114 562 412 230 165 0.128 0.016   5.58 0.02 0.05 0.35   496 62.0
  770413 1045149   141 598 438 271  86 0.090 0.016   5.48 0.01 0.08 0.34   532 59.5
  770413  955150   115 520 381 281 162 0.105 0.016   4.98 0.02 0.06 0.39   656 59.5
  770413  950151   129 538 394 239  94 0.085 0.020   4.79 0.01 0.07 0.28   696 56.6
  770413  945152   132 629 460 253  74 0.085 0.016   5.29 0.01 0.05 0.35   676 57.6
  770413  940153   133 591 433 267  60 0.065 0.033   6.36 0.01 0.12 0.50   744 60.8
  770413  935154   123 558 409 248  78 0.069 0.020   6.36 0.02 0.08 0.45   692 60.1
  770413 0915155    44 518 380 278 120 0.080 0.020   5.23 0.02 0.11 0.29   436 72.1
  770413  910156   116 574 420 235  90 0.132 0.020   6.00 0.01 0.08 0.46   644 62.0
  770413  900157   123 465 342 238 185 0.252 0.073   3.48 0.02 0.16 0.60   664 60.8
  770413  905220   119 580 425 244  75 0.090 0.016   6.00 0.01 0.08 0.45   544 60.8
C 770413 1415527   110 571 418 250  66 0.110 0.016   5.70 0.01 0.24 0.60   556 60.6
77APR18   29
C 770418 1645162   198 829 604 290  62 0.420 0.212   2.78 0.16 1.96 0.49   704132.8
C 770418 1535213    66 475 349 208  33 0.016 0.008   4.24 0.20 0.06 0.69   268 93.4
  770418 1625165   100 744 543 235  26 0.114 0.033   1.70 0.34 0.18 0.00   556104.4
  770418 1620166   134 764 558 239  46 0.076 0.024   0.34 0.14 0.14 0.51   516 97.8
  770418 1615167   109 591 433 226  48 0.067 0.016   0.05 0.08 0.10 0.40   456 95.1
  770418 1610168   135 633 466 237  59 0.071 0.016   0.05 0.08 0.08 0.47   440100.0
  770418 1545169   139 588 430 244  46 0.053 0.016   0.05 0.02 0.08 0.37   444107.1
  770418 1545170   139 631 461 253  61 0.073 0.010   0.05 0.01 0.09 0.36   488101.8
  770418 1515171    92 547 401 232  74 0.055 0.008   2.72 0.10 0.12 0.23   424 96.8
  770418 1510172   125 598 431 235  50 0.047 0.008   2.18 0.10 0.08 0.32   420 96.8
  770418 1505173   116 571 418 223  61 0.010 0.008   2.18 0.10 0.08 0.27   392 95.1
  770418 1500174   130 533 394 235  44 0.043 0.008   2.08 0.08 0.06 0.34   340 96.1
  770418 1410175   115 564 413 250  60 0.029 0.008   2.02 0.08 0.08 0.32   348 99.4
  770418 1405176   111 562 412 250  72 0.035 0.008   1.96 0.08 0.04 0.31   364 83.8
  770418 1400177   109 515 378 249  74 0.039 0.008   1.78 0.08 0.08 0.32   380 88.1
  770418 1350178   124 547 401 243  74 0.033 0.008   1.76 0.08 0.08 0.27   368 79.1
  770418 1345179   117 573 426 247  46 0.043 0.008   1.96 0.08 0.08 0.27   384 82.7
  770413 1340180   129 505 371 243  58 0.049 0.008   1.96 0.08 0.08 0.32   400 83.9
  770418 1335181    72 452 332 213  45 0.039 0.008   1.90 0.08 0.07 0.33   380 81.8
  770418 1330182    78 490 360 221  66 0.033 0.008   2.94 0.06 0.04 0.31   368 97.8
  770418 1310183    92 510 374 229  45 0.041 0.008   3.00 0.06 0.08 0.27   364 97.4
  770418 1305184    87 504 370 215  75 0.061 0.008   3.06 0.06 0.12 0.33   364 96.8
  770418 1300185    87 461 339 226  66 0.039 0.008   3.00 0.06 0.04 0.36   328 99.8
  770418 1255186    80 492 361 215  76 0.037 0.008   2.94 0.06 0.04 0.21   316 97.1
  770418 1245187   121 577 422 250  64 0.039 0.008   3.15 0.09 0.08 0.17   332 95.1
  770418 1240188    34 461 339 244  65 0.039 0.008   3.14 0.10 0.04 0.31   312 92.1
  770418 1235189   113 586 429 247  58 0.049 0.008   3.14 0.10 0.11 0.00   340 98.8
  770418 1230190   101 528 384 229  67 0.000 0.008   3.00 0.12 0.06 0.00   340 97.8
C 770418 1535213    66 475 349 208  33 0.016 0.008   4.24 0.20 0.06 0.69   268 93.4
77APR22    6
  770422 1940283    51 476 350     345 0.30                                       32.1
  770422 2010290    56 497 365     470 0.77                                       37.3
C 770422 1350528   265 219 885 317 130 1.290 0.929   1.02 0.30 0.00 0.00   852 97.8
C 770422 1350529   145 798 582 224 110 0.226 0.024   1.18 0.14 0.12 0.00   652 92.4
  770422 2020530    58 458 337     465 0.83                                       34.1
  770422 2020531    60 518 380     175 0.45                                       48.3
77APR23    4
C 770423 1220103    36 245 183  45 500 2.92  0.33    8.03 0.02 0.62 0.93  1248 23.4
C 770423 1445103    44 282 210  62 500 1.74  0.28    8.64 0.01 0.30 0.95   580 26.2
C 770423 1255162    47 189 143  32 190 1.33  0.31    3.17 0.01 0.20 0.55   244 16.5
C 770423 1515162    59 239 179  54 250 1.17  0.28    4.04 0.01 0.20 0.50   292 22.4
77APR25   31
  770425 1035158    51 251 188 108  35 0.105 0.020   6.84 0.01 0.12 0.68   400 23.7
  770425 1050162    56 414 305 210  22 0.894 0.690   7.18 0.03 0.15 0.75   408 50.4
  770425 1055163    49 414 305 223  30 0.418 0.260   6.54 0.04 0.22 0.68   388 52.1
  770425 1100164   112 458 337 232  26 0.412 0.261   8.04 0.02 0.12 0.88   384 45.0
  770425 1105165    52 414 305 233  20 0.386 0.240   6.92 0.02 0.13 0.67   384 52.1
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 770425  1130166   118  480  353  242    25  0.287  0.212    7.80  0.02  0.12  0.78    424  42.3
 770425  1125167   120  448  336  242    17  0.302  0.179    7.56  0.02  0.10  0.55    428  42.7
 770425  1120168    92  346  256  163    37  0.242  0.148    3.96  0.01  0.12  0.83    284  39.9
 770425  1145169   113  424  312  219    31  0.226  0.148    5.58  0.01  0.11  0.79    332  40.5
 770425  1145170   113  415  306  221    29  0.233  0.148    5.58  0.01  0.08  0.72    304  37.8
 770425  1225171   119  423  312  242    72  0.222  0.096    7.68  0.01  0.20  0.55    244  36.6
 770425  1220172   126  449  330  253    40  0.184  0.082    7.80  0.01  0.08  0.67    300  39.2
 770425  1215173   126  437  322  260    60  0.181  0.098    8.16  0.01  0.08  0.64    284  39.0
 770425  1210174    52  414  305  245    45  0.193  0.070    7.00  0.04  0.17  0.53    408  49.4
 770425  1435175   123  455  335  255    70  0.215  0.098    7.98  0.02  0.08  0.67    296  39.2
 770425  1430176   118  426  314  241    86  0.220  0.098    7.56  0.02  0.12  0.73    296  41.4
 770425  1425177   127  477  350  212    68  0.184  0.098    8.04  0.02  0.08  0.57    312  40.3
 770425  1420178   128  458  337  212    68  0.152  0.114    7.98  0.02  0.09  0.76    336  41.8
 770425  1410179   126  452  332  210    73  0.179  0.098    8.04  0.02  0.05  0.60    328  39.0
 770425  1400180   122  456  335  212    84  0.175  0.098    8.10  0.02  0.05  0.70    324  39.7
 770425  1355181   117  425  313  221    57  0.161  0.063    5.88  0.01  0.07  0.53    288  33.5
 770425  1350182   118  454  334  202    56  0.148  0.065    9.24  0.02  0.04  0.46    316  36.6
 770425  1345183   125  461  339  212    65  0.150  0.065    9.48  0.02  0.04  0.61    396  35.9
 770425  1340184   127  446  328  216    64  0.150  0.082    9.48  0.02  0.04  0.41    356  36.8
 770425  1335185   134  518  380  225    42  0.096  0.033    9.48  0.01  0.06  0.59    396  36.4
 770425  1330186   140  479  352  235    62  0.083  0.033    9.54  0.01  0.04  0.51    384  35.2
 770425  1325187   130  519  381  225    56  0.085  0.025    9.48  0.02  0.04  0.61    452  34.2
 770425  1320188   131  465  342  226    46  0.110  0.038   10.18  0.02  0.05  0.60    396  38.6
 770425  1315189   130  503  369  239    55  0.105  0.016   10.54  0.02  0.04  0.61    412  35.2
 770425  1310190   127  487  358  226    62  0.125  0.033   10.85  0.01  0.06  0.69    444  35.9
 770425  1155213    46  414  305  223    85  0.202  0.080    7.35  0.50  0.26  0.59    492  44.0
77APR26    29
 770426  1045191    87  414  305  159    33  0.111  0.008    6.02  0.04  0.12  0.58    336  53.4
 770426  1050192    98  440  324  179    42  0.122  0.008    5.36  0.04  0.12  0.53    308  56.7
 770426  1100193    98  471  346  190    37  0.122  0.008    5.60  0.04  0.22  0.53    276  65.1
 770426  1120195   117  428  315  201    39  0.063  0.008    7.41  0.03  0.10  0.35    268  55.1
 770426  1240195   104  449  330  187    50  0.080  0.008    7.53  0.03  0.08  0.52    280  55.4
 770426  1150196    78  370  273  163    56  0.076  0.008    7.55  0.03  0.08  0.47    280  50.7
 770426  1310197    91  393  290  179    61  0.076  0.008    7.87  0.03  0.08  0.52    264  51.4
 770426  1320198   107  441  325  195    46  0.089  0.008    7.77  0.03  0.04  0.41    244  51.7
 770426  1325199   106  471  346  201    56  0.091  0.008    8.37  0.03  0.08  0.47    264  55.4
 770426  1330200   102  492  361  219    44  0.087  0.016    9.69  0.03  0.08  0.42    280  53.4
 770426  1335201   113  529  388  221    46  0.063  0.016   10.17  0.03  0.16  0.34    380  55.1
 770426  1400212    92  496  364  209    70  0.089  0.016    9.98  0.04  0.08  0.42    340  50.7
 770426  1035214    81  365  270  137    46  0.115  0.016    5.42  0.04  0.04  0.51    220  45.4
C770426  1145215   100  491  361  208    40  0.098  0.016    7.04  0.04  0.12  0.00    312  70.1
C770426  1300215    96  444  327  199    48  0.113  0.008    6.92  0.04  0.11  0.39    288  56.7
C770426  1135211   101  470  345  201    49  0.115  0.008    7.34  0.04  0.16  0.34    300  55.4
C770426  1250221   100  493  363  204    50  0.102  0.008    7.28  0.04  0.12  0.43    272  57.1
C770426  1340274   103  559  409  251    22  0.054  0.005    0.00  0.04  2.50  0.20    332  56.4
 770425  0000194    87  386  285  167    48  0.087  0.008    5.60  0.04  0.12  0.53    264  55.1
 770426  1510202   122  493  363  174    82  0.20   0.02     8.60  0.10  0.10  0.35    548  35.2
 770426  1500203   125  515  378  210    60  0.21   0.02     8.69  0.11  0.10  0.40    448  35.5
 770426  1455204   125  523  384  213    46  0.29   0.02     7.03  0.09  0.05  0.25    460  35.6
 770426  1450205   110  483  355  192    85  0.22   0.02     9.21  0.09  0.10  0.30    476  35.1
 770426  1445206   115  493  363  155    82  0.21   0.02     8.63  0.07  0.10  0.35    420  35.8
 770426  1440207   120  517  379  212    72  0.31   0.02     7.76  0.04  0.10  0.25    320  35.2
 770426  1435208   113  505  371  201    70  0.23   0.02     9.87  0.08  0.05  0.40    440  35.4
 770426  1430209   123  523  384  213    77  0.23   0.02     7.66  0.04  0.05  0.30    444  35.5
 770426  1425210   120  521  382  197    84  0.23   0.02     9.74  0.06  0.10  0.25    464  37.0
 770426  1420211   133  542  397  234    71  0.30   0.01    10.00  0.00  0.10  0.30    508  37.0
77APR27    36
 770427. 1520124   129  621  454  213   160  0.51   0.03     7.01  0.14  0.06  0.74    516  48.5
 770427  1520125   136  643  470  237   106  0.43   0.03     7.78  0.02  0.05  0.60    444  49.8
 770427  1515126   135  652  476  240    96  0.37   0.03     8.84  0.06  0.05  0.60    508  48.7
 770427  1500127   137  648  474  252    94  0.42   0.04     9.14  0.01  0.05  0.40    384  47.4
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  770427  1500128   143 708 517 258   98 0.40   0.01     9.39 0.01 0.04 0.26   552 43.8
  770427  1455129   128 663 484 236  105 0.32   0.03     8.37 0.03 0.10 0.40   520 45.4
  770427  1450130   138 658 481 245  115 0.33   0.03     8.98 0.02 0.10 0.45   476 45.6
  770427  1455131   136 657 480 248   84 0.38   0.03     9.08 0.02 0.00 0.40   396 46.9
  770427  1410132   128 594 435 236  135 0.40   0.03     8.36 0.04 0.00 0.55   440 48.1
  770427  1405133   131 584 427 240  120 0.34   0.02     8.29 0.01 0.20 0.25   424 48.5
  770427  1400134   132 567 415 219  134 0.41   0.02     8.02 0.08 0.15 0.40   440 47.8
  770427  1355135   171 809 589 366   21 0.47   0.11    14.89 0.11 0.85 0.20   624 79.1
  770427  1350136   123 587 430 246   82 0.36   0.02    10.16 0.04 0.15 0.60   436 47.6
  770427  1340137   121 529 388 210  132 0.39   0.02     7.39 0.01 0.05 0.30   404 44.5
  770427  1215138   129 575 421 239  160 0.42   0.03     8.19 0.01 0.05 0.35   404 48.7
  770427  1210139   127 562 412 236  100 0.39   0.03     8.19 0.01 0.10 0.30   436 46.3
  770427  1205140   124 570 417 229  120 0.46   0.02     8.29 0.01 0.05 0.30   444 47.4
  770427  1200141   138 606 443 246  145 0.42   0.02     8.29 0.01 0.05        440 45.8
  770427  1155142   139 601 440 243  123 0.51   0.03     8.29 0.01 0.05 0.35   440 45.4
  770427  1150143   124 560 410 222  126 0.22   0.02     8.19 0.01 0.03 0.37   416 46.9
  770427  1120144   112 539 395 207  103 0.24   0.01     7.79 0.01 0.03 0.37   412 45.2
  770427  1115145   121 548 402 218  118 0.32   0.02     7.98 0.02 0.08 0.37   428 45.8
  770427  1110146   139 592 433 237   74 0.40   0.01     8.09 0.01 0.02 0.53   448 45.2
  770427  1105147   139 586 429 273   57 0.39   0.01    11.19 0.01 0.23 0.13   424 45.4
  770427  1100148   129 574 420 267  135 0.38   0.01    11.24 0.06 0.30 0.30   436 49.4
  770427  1055149   127 551 404 270   98 0.38   0.03    11.28 0.02 0.25 0.20   404 46.1
  770427  1050150   137 578 423 276   87 0.32   0.04    11.29 0.01 0.33 0.12   424 35.4
  770427  1045151   134 559 409 282   57 0.25   0.03    10.59 0.01 0.18 0.17   440 34.0
  770427  1005152   134 575 421 276  120 0.37   0.05    11.13 0.07 0.15 0.35   460 35.9
  770427  1005153   143 589 431 288   81 0.26   0.01    10.79 0.01 0.26 0.24   460 34.7
  770427  0905154   133 563 412 273  130 0.42   0.03    11.19 0.01 0.13 0.47   440 33.9
  770427  0935155   139 663 484 282   95 0.37   0.05    10.99 0.01 0.13 0.32   424 33.4
  770427  0930156   133 653 477 267  105 0.33   0.05    10.59 0.01 0.30 0.30   420 35.2
  770427  0920157   122 543 398 210  175 1.04   0.30     6.59 0.01 0.35 0.60   444 26.2
C 770427  1345216   138 788 574 396   18 0.18   0.02     9.59 0.01 0.22 0.38   592 81.1
  770427  0925220   140 653 477 270  120 0.46   0.04    10.99 0.01 0.28 0.42  9999 35.0
  770502  0950105    55 466 343 220  180 1.200  0.750    8.69 0.08 0.24 1.51   324 50.7
  770502  0945106    55 466 343 226  190 1.17   0.750    8.57 0.10 0.22 1.58   504 52.7
  770502  0945108    32 203 153 126   75 0.382  0.18     2.90 0.06 0.26 0.69   368 56.1
  770502  0940109    51 414 305 210  165 1.070  0.660    7.51 0.04 0.22 1.33   488 48.7
  770502  0900114    61 518 380 242  210 0.773  0.380    4.73 0.06 0.15 0.95   524 51.7
  770502  0855115    57 466 343 233  275 0.710  0.360    5.36 0.05 0.15 0.85   524 56.1
  770504  0955104    51 466 343 223  130 0.969  0.65     9.03 0.05 0.25 1.35   408 49.1
  770504  0930110    54 414 305 210  220 1.17   0.75     7.29 0.05 0.22 1.53   420 47.7
  770504  0925111    58 466 343 213  210 1.12   0.76     6.35 0.08 0.22 1.43   448 47.7
  770504  0920112    60 466 343 216  250 1.02   0.79     5.96 0.06 0.26 1.39   460 49.1
  770504  0905113    63 518 380 229  265 1.020  0.620    4.04 0.04 0.22 1.28   460 51.4
  770504  0850116    63 518 380 259  110 0.787  0.380    6.53 0.15 0.17 0.78   464 55.7
  770504  0840117    59 518 380 250  112 0.526  0.190    5.35 0.06 0.13 0.57   416 54.4
  770504  0820118    64 518 380 265   85 0.257  0.085    4.00 0.03 0.13 0.52   436 55.7
  770504  0805119    72 622 455 300  110 0.291  0.102    5.83 0.11 0.26 0.49   480 68.7
  770504  0800120    68 622 455 291   92 0.316  0.119    6.14 0.11 0.30 0.50   464 55.4
  770504  0755121    68 622 455 281   78 0.257  0.085    6.17 0.08 0.17 0.83   440 55.4
  770504  0750122    61 518 380 256  142 0.307  0.051    6.40 0.07 0.22 0.58   420 49.7
  770504  0745123    67 570 417 269   95 0.240  0.068    6.46 0.11 0.22 0.53   388 51.1
  770504  0700270    72 518 380 275  420 1.370  0.799    7.71 0.03 0.26 1.84   536 58.4
  770504  1000270    57 518 380 246  120 1.160  0.714   11.59 0.31 0.22 2.23   396 56.4
  770504  0700271    46 311 231 174  500 1.190  0.544    6.21 0.04 0.30 1.90   412 37.5
  770504  1000271    47 363 268 199  130 0.930  0.578   10.15 0.24 0.30 1.95   212 43.7
  770504  0730532    54 466 343 250  195 0.328  0.034   10.04 0.03 0.34 0.46   336 43.4
  770504  0730533    52 518 380 246  160 0.243  0.068    8.98 0.03 0.13 1.02   364 52.1
77MAY12   30
  770512  1315158   113 409 301 169   76 0.129  0.009    1.48 0.05 0.24 0.61   228 48.4
C 770512  1340162   170 653 477 299   75 0.373  0.128    3.54 0.32 1.19 0.11   424101.1
  770512  1345163   122 896 652 281  245 0.269  0.064    5.33 0.65 0.20 0.70   520115.5
  770512  1355165   127 837 610 265 280 0.159 0.009   2.53 0.46 0.20 0.50  536102.8
  770512  1410166   181 742 541 281  74 0.154 0.017   0.89 0.20 0.66 0.04  460  92.8
  770512  1415167   182 921 526 271  94 0.184 0.017   1.21 0.15 0.31 0.00  456  89.4
  770512  1420168   135 579 424 225 110 0.092 0.017   0.43 0.06 0.09 0.36  392  81.4
  770512  1445169   139 599 438 235  83 0.071 0.009   0.94 0.04 0.13 0.32  408  88.1
  770512  1440170   163 659 481 267  68 0.060 0.009   0.78 0.04 0.12 0.28  428  78.9
  770512  1530171   150 621 454 262  82 0.053 0.009   4.07 0.11 0.13 0.22  352  68.6
  770512  1525172    98 537 394 221 133 0.046 0.009   4.03 0.10 0.24 0.11  304  65.7
  770512  1520173   101 540 396 229 110 0.051 0.009   3.81 0.10 0.25 0.10  296  69.4
  770512  1515174   106 540 396 226 155 0.035 0.009   3.70 0.10 0.09 0.31  288  66.4
  770512  1625175   148 610 446 267  76 0.048 0.009   3.66 0.09 0.31 0.04  348  68.4
  770512  1620176   151 620 453 267  66 0.058 0.009   3.65 0.10 0.26 0.14  360  67.6
  770512  1613177   153 632 462 276  72 0.039 0.009   3.49 0.10 0.15 0.15  364  71.4
  770512  1613178   151 632 462 262  52 0.044 0.003   3.50 0.09 0.26 0.01  328  69.1
  770512  1610179   136 586 427 253  84 0.028 0.003   3.77 0.09 0.26 0.04  484  68.7
  770512  1610180   161 631 461 283  65 0.044 0.003   3.71 0.09 0.09 0.16  512  70.8
  770512  1605181   136 583 427 255  80 0.037 0.003   4.69 0.09 0.04 0.31  472  70.4
  770512  1600182   141 576 422 254  78 0.055 0.003   4.71 0.07 0.23 0.02  460  64.4
  770512  1555183   134 584 427 244  68 0.051 0.003   4.83 0.06 0.35 0.00  468  68.4
  770512  1550184   127 552 404 244  58 0.035 0.003   4.87 0.07 0.04 0.26  424  64.7
  770512  1550185   117 527 386 240  86 0.037 0.003   4.61 0.06 0.05 0.25  468  62.4
  770512  1545186   109 539 395 234 102 0.019 0.003   4.72 0.06 0.05 0.30  424  64.4
  770512  1700187   125 573 420 245  64 0.019 0.009   5.13 0.08 0.05 0.40  416  61.1
  770512  1705188   120 552 404 245  46 0.021 0.009   5.08 0.08 0.09 0.36  416  63.4
  770512  1720189    98 527 386 229 118 0.112 0.009   5.27 0.11 0.13 0.32  436  65.4
  770512  1715190   120 560 410 244  81 0.051 0.003   5.42 0.12 0.53 0.00  464  65.4
C 770512  1435213    87 525 385 230  94 0.021 0.003   5.31 0.18 0.05 0.40  432  66.7
77MAY19   23
  770519  1110191    91 673 492 284 240 0.048 0.02    0.04 0.04 0.16 0.44  612  86.3
  770519  1110192   106 725 529 239 125 0.048 0.02    0.02 0.02 0.17 0.18  652  80.8
  770519  1100193    81 581 425 221  28 0.145 0.05    0.91 0.01 0.13 0.17  584  67.1
  770519  1055194    80 581 425 227  42 0.110 0.02    0.76 0.06 0.09 0.26  536  68.4
  770519  1045195    63 414 305 252  90 0.092 0.02    0.79 0.10 0.39 0.06  448  59.2
  770519  1015196    71 476 350 275 120 0.167 0.04    0.86 0.01 0.07 0.48  504  53.6
  770519  1010197    67 476 350 258  79 0.129 0.02    0.57 0.14 0.56 0.39  472  58.4
  770519  1005198    62 476 350 239 210 0.118 0.02    0.70 0.01 0.09 0.36  452  60.7
  770519  0955199    74 528 387 278  60 0.280 0.17    1.01 0.01 0.05 0.90  468  58.7
  770519  0950200    64 518 380 291  60 0.118 0.04    3.79 0.14 0.69 0.16  504  59.7
  770519  0920203    67 518 380 300  75 0.103 0.04    3.96 0.02 0.65 0.00  452  64.4
  770519  0915204    62 518 380 294  76 0.120 0.04    3.97 0.01 0.05 0.65  456  61.7
  770519  0910205    61 518 380 300  44 0.065 0.02    4.17 0.02 0.30 0.10  548  64.4
  770519  0910206    68 518 380 300  54 0.077 0.05    4.17 0.02 0.07 0.48  516  62.4
  770519  0905207    60 528 387 278  74 0.077 0.02    4.15 0.04 0.07 0.28  544  64.6
  770519  0855208    66 528 387 304  39 0.039 0.01    4.14 0.09 0.17 0.13  488  66.2
  770519  0850209    70 528 387 307  72 0.073 0.05    4.17 0.01 0.07 0.38  516  65.1
  770519  0845210    60 528 387 278  60 0.052 0.02    4.06 0.07 0.11 0.58  548  62.2
  770519  0840211    61 528 387 284  85 0.052 0.01    4.07 0.06 0.07 0.28  500  64.1
  770519  0830212    62 528 387 294  36 0.026 0.02    3.84 0.14 0.13 0.24  512  67.4
C 770519  1035215    66 634 463 265  37 0.019 0.01    2.80 0.16 0.04 0.26  556  74.7
  770519  1030221    62 581 425 307  68 0.030 0.01    2.93 0.08 0.22 0.13  564  74.4
  770519  0950274    59 581 425 252  32 0.090 0.04   10.04 0.06 0.09 0.26  472  65.9
77MAY20   27
  770520  1430130    43 777 566 242  30 0.040 0.02    2.47 0.18 0.17 0.38  472  65.1
  770520  1430131    40 740 540 220  68 0.066 0.05    2.91 0.25 0.30 0.30  352  65.9
  770520  1415132    52 634 463 271  58 0.040 0.02    1.82 0.12 0.09 0.21  416  70.7
  770520  1410133    60 539 395 281  50 0.031 0.02    1.84 0.10 0.11 0.39  376  67.4
  770520  1405134    56 647 473 268  32 0.053 0.02    1.83 0.11 0.19 0.51  420  67.7
  770520  1350137    63 647 473 294  90 0.079 0.04    1.92 0.02 0.19 0.61  480  70.2
  770520  1325138    65 701 512 307  77 0.053 0.04    1.82 0.02 0.15 0.70  460  69.1
  770520  1320139    68 701 512 307  93 0.057 0.04    1.82 0.02 0.15 0.30  452  68.7
  770520  1315140    65 701 512 290 100 0.061 0.04    1.52 0.01 0.22 0.28  464  70.6
  770529 1305141    69 634 463 304  66 0.062 0.04    1.52 0.01 0.22 0.28   388  70.6
  770520 1255142    60 634 463 291  84 0.062 0.04    1.83 0.06 0.11 0.49   404  70.2
  770520 1250143    67 634 463 307  45 0.048 0.02    1.69 0.04 0.10 0.25   380  69.7
  770520 1125144    58 634 463 287  84 0.048 0.04    2.02 0.02 0.22 0.28   384  71.9
  770520 1120145    63 634 463 304  52 0.040 0.03    1.85 0.09 0.11 0.34   216  74.2
  770520 1115146    60 647 473 291 150 0.167 0.05    1.82 0.02 0.05 0.45   456  75.2
  770520 1110147    65 647 473 300 148 0.171 0.03    1.83 0.01 0.22 0.23   456  73.6
  770520 1045148    71 647 473 307 138 0.242 0.08    1.85 0.04 0.43 0.02   640  71.9
  770520 1040149    65 662 484 307 115 0.185 0.03    1.83 0.01 0.17 0.28   620  74.2
  770520 0815150    69 662 484 307 122 0.180 0.06    2.03 0.01 0.17 0.33   672  74.4
  770520 0810151    65 662 484 304 100 0.127 0.04    1.93 0.01 0.13 0.37   716  74.6
  770520 0800152    63 647 473 307  48 0.066 0.02    1.91 0.03 0.12 0.38   636  72.7
  770520 0755153    60 647 473 284  83 0.075 0.04    2.03 0.01 0.26 0.19   656  69.2
  770520 0745154    67 634 463 304  55 0.070 0.04    1.93 0.01 0.19 0.29   728  72.6
  770520 0735155    69 634 463 307  59 0.070 0.03    1.72 0.01 0.11 0.34   636. 71.9
  770520 0730156    60 634 463 300  70 0.084 0.03    1.92 0.02 0.09 0.31   632  73.7
  770520 0720157    75 528 387 284  99 0.303 0.15    1.34 0.04 0.53 0.12   596  63.7
  770520 0725220    56 593 434 271 190 0.156 0.03    1.93 0.06 0.26 0.14   680  75.4
77JUN01  24
  770601 1420191   116 755 551 302 370 0.12  0.02    0.01 0.01 1.08 0.07   716  82.8
  770601 1435192   119 862 628 271 105 0.11  0.01    0.01 0.01 0.17 0.28   716  78.6
  770601 1440193   113 828 603 252  43 0.30  0.15    0.50 0.01 0.08 0.42   720  70.2
  770601 1445194    63 539 395 268 130 0.10  0.02    0.09 0.01 0.75 0.20   640  68.6
  770601 1500195    77 539 395 291  66 0.06  0.01    0.37 0.04 0.17 0.28   572  56.9
  770601 1530196    85 431 317 307  54 0.88  0.78    0.00 0.05 0.95 0.60   544  61.7
  770601 1550197    57 485 356 258 112 0.08  0.01    0.09 0.01 0.13 0.37   512  58.2
  770601 1555198    62 529 388 249  90 0.07  0.02    0.01 0.04 0.09 0.41   536  62.1
  770601 1600199    50 529 388 223  50 0.22  0.10    0.19 0.01 0.65 0.05   548  61.7
  770601 1610200    53 539 395 275  72 0.07  0.02    3.25 0.12 0.13 0.32   540  60.4
  770601 1615201    58 539 395 300  34 0.06  0.01    3.13 0.03 0.11 0.39   540  58.6
  770601 1700203    51 539 395 278  65 0.05  0.02    2.73 0.08 0.09 0.51   580  67.1
  770601 1655204    49 539 395 268  63 0.05  0.02    2.20 0.04 0.09 0.26   724  68.6
  770601 1650205    46 539 395 249  60 0.04  0.01    1.95 0.04 0.09 0.31   636  67.6
  770601 1645206    40 539 395 245  26 0.057 0.02    1.35 0.03 0.11 0.34   592  64.9
  770601 1645207    34 476 350 223  15 0.013 0.02    1.13 0.04 0.09 0.36   576  65.1
  770601 1640208    31 476 350 210  56 0.013 0.02    1.36 0.02 0.08 0.37   636  66.7
  770601 1640209    38 476 350 242  43 0.044 0.02    1.36 0.02 0.13 0.32   600  62.6
  770601 1635210    39 528 387 229  45 0.035 0.02    1.20 0.02 0.09 0.36   576  60.7
  770601 1430211    32 466 343 210  26 0.013 0.02    0.76 0.01 0.09 0.31   552  63.2
  770601 1710212    35 442 325 213  52 0.022 0.02    0.24 0.02 0.06 0.34   568  63.7
C 770601 1515215    67 567 415 258  44 0.053 0.02    0.80 0.07 0.04 0.16   744  72.4
  770601 1510221    63 589 431 233  45 0.017 0.01    1.06 0.06 0.16 0.09   716  77.6
  770601 1605274    60 557 408 309  64 0.198 0.09    8.31 0.10 0.13 0.17   700  67.4
77JUN02  22
  770602 0915163   332 712 520 347 157 2.03  1.76    0.05 0.10 9.70 0.30  1536220.2
  770602 0955170   199 783 571 252  51 0.09  0.01    0.01 0.01 0.02 0.83   260191.9
  770602 1020171   151 465 342 287 100 0.04  0.02    0.80 0.02 0.08 0.32   272  56.0
  770602 1030172   160 481 353 294 105 0.04  0.01    0.01 0.01 0.09 0.21   188  58.6
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  770602 1040174   176 563 412 304  58 0.02  0.01    0.01 0.01 0.06 0.29   260  57.2
  770602 1155176   153 485 355 291  28 0,03  0.02    0.01 0.01 0.08 0.27   272  57.7
  770602 1150177   174 497 365 307  32 0.04  0.02    0.01 0.01 0.11 0.19   280  57.2
  770602 1145178   144 459 363 291  72 0.08  0.01    0.01 0.01 0.09 0.31   224  57.7
  770602 1145179   171 479 352 227  48 0.11  0.02    1.29 0.04 0.09 0.36   216  56.5
  770602 1140180   141 579 424 271  52 0.09  0.02    1.23 0.05 0.09 0.31   180  59.8
  770602 1135181   110 619 453 293  46 0.06  0.01    0.68 0.03 0.09 0.31   152  54.8
  770602 1130182    91 526 386 293  88 0.04  0.01    2.81 0.05 0.08 0.37   112  55.3
  770602 1125183    94 515 378 291  88 0.03  0.01    2.56 0.04 0.06 0.24   536  55.3
  770602 1120184    98 550 403 307  65 0.04  0.01    2.10 0.04 0.07 0.28   476  56.0
  770602 1115185    89 519 381 304  38 0.02  0.01    1.82 0.02 0.07 0.23   432  54.3
  770602 1110186    86 518 380 234  68 0.03  0.01    1.84 0.05 0.06 0.24   456  54.3
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   770602  1305187     72  528  387  265    24  0.01   0.01      0.08  0.07  0.06  0.29    460  62.4
   770602  1310188     70  539  395  268    46  0.02   0.01      0.07  0.03  0.06  0.29    476  57.7
   770602  1315189     78  539  395  300    58  0.10   0.01      0.01  0.01  0.09  0.41    480  70.8
   770602  1415190     45  431  317  258    74  0.11   0.03      0.01  0.01  0.13  0.37    424  65.
 C 770602  1000213     80  539  383  338    65  0.05   0.03      0.01  0.01  0.09  0.36    524  82.2
77JUN08    36
   770608  1610120     911077  781  294  146  0.210  0.051     0.05  0.03  0.13  0.62    864  77.9
   770608  1605121     851104  801  297   55  0.141  0.068     0.01  0.02  0.13  0.52    704  73.7
   770608  1600122     911104  801  297   30  0.153  0.119     0.01  0.02  0.17  0.63    772  70.2
   770608  1555123     971171  851  300   84  0.222  0.172     0.01  0.02  0.56  0.34    872  75.7
   770608  1525125    1941347  977  307   32  0.122  0.05      0.01  0.01  0.09  0.76    756  70.1
   770608  1520126    1731294  939  300   56  0.088  0.02      0.01  0.01  0.13  0.72    584  71.9
   770608  1455127    1231104  801  239   78  0.036  0.02      0.01  0.01  0.11  0.79    496  69.6
   770608  1455128    23224731786  239  126  0.277  0.14      0.01  0.01  0.15  0.85   1084109.8
   770608  1450129    19919521413  246   65  0.153  0.09      0.01  0.01  0.13  0.77    988  97.1
   770608  1445130    17319521413  252   80  0.124  0.03      0.01  0.02  0.17  0.83   1004  92.2
   770608  1440131    14618371329  307   80  0.126  0.03      0.01  0.01  0.17  0.88    868  87.2
   770608  1435132    1771012  735  252   70  0.034  0.02      0.01  0.02  0.09  0.41    484100.1
   770608  1430133    139  862  628  291   85  0.025  0.02      0.03  0.02  0.09  0.41    460  95.3
   770608  1425134    152  883  643  304   72  0.018  0.02      0.03  0.02  0.09  0.56    420  97.7
   770608  1400137    177  703  513  221   85  0.020  0.02      0.01  0.01  0.09  0.31    668100.1
   770608  1235138    149  920  669  304   92  0.032  0.02      0.01  0.01  0.09  0.31    376  98.9
   770608  1230139    158  725  529  221   56  0.018  0.02      0.01  0.01  0.09  0.36    424  98.7
   770608  1215140    158  395  291  214   50  0.018  0.02      0.01  0.01  0.09  0.36    280  94.6
   770608  1210141    155  520  381  307   76  0.020  0.02      0.01  0.01  0.09  0.36    456  97.2
   770608  1205142    140  563  412  300   65  0.011  0.02      0.01  0.01  0.09  0.41    428  95.8
   770608  1200143    138  820  597  271   71  0.036  0.02      0.01  0.01  0.09  0.31    312  75.1
   770608  1145144    148  402  296  246   58  0.023  0.02      0.01  0.01  0.06  0.44    420  92.7
   770608  1135145    129  647  473  291   90  0.043  0.02      0.01  0.01  0.04  0.41    444  94.6
   770608  1120146    121  843  614  287  210  0.221  0.02      0.04  0.01  0.09  0.51    460  91.5
   770608  1115147    148  778  567  239  210  0.124  0.03      0.01  0.01  0.13  0.42    616  91.5
   770608  1110148    146  609  446  307  134  0.198  0.03      0.03  0.02  0.13  0.37    444  91.5
   770608  1100149    154  609  446  208   97  0.140  0.02      0.03  0.02  0.09  0.31    288  91.0
   770608  1000150    132  611  447  291  135  0.045  0.02      0.01  0.01  0.09  0.31    204  95.3
   770608  0945151    137  476  350  231   72  0.090  0.02      0.01  0.01  0.06  0.24    204  83.6
   770608  0935152    136  542  397  297   30  0.023  0.01      0.01  0.01  0.04  0.51    272  96.5
   770608  0930153    118  566  415  262   48  0.041  0.01      0.01  0.01  0.04  0.46    356  85.1
   770608  0915154    119  760  554  281   31  0.038  0.01      0.01  0.01  0.04  0.51    368  96.5
   770608  0915155    122  674  492  287   48  0.068  0.01      0.02  0.01  0.06  0.54    388  90.6
   770608  0825156    134  674  492  304   36  0.056  0.01      0.02  0.01  0.05  0.55    404  90.1
   770608  0815157    174  658  481  258   68  0.473  0.26      0.83  0.14  0.67  0.88    504  87.7
   770608  0820220    144  499  366  307   47  0.106  0.01      0.01  0.02  0.06  0.64    224  89.1
77JUN30    32
   770630  1745101     27   78   63   32  500  1.95   1.00      3.67  0.15  1.76  5.49 5604    0.0
   770630  1740103     50  218  164  142  500  0.970  1.07      3.71  0.32  2.54  7.2610444    0.0
   770630  1730108     30  207  156   85  500  1.73   0.59  5   6.25  0.11  1.12  4.48 4444   16.5
   770630  1815161     31  163  124   79  500  1.28   0.83  3   1.97  0.15  1.72  3.83 7304    0.0
   770630  1130162     79  305  227  221  500  3.23   0.30  6   1.02  0.04  0.26  4.5927488   31.5
   770630  1140165     66  712  520  261  500  1.35   0.11  9   2.99  0.03  0.13  3.7212824   78.1
   770630  1805165     41  224  168  120  500  1.86   0.59  5   2.25  0.08  0.86  7.4915108   13.5
   770630  1830193     30  160  122   79  500  1.79   0.59  5   4.34  0.11  1.16  6.3919228    7.9
   770630  1835195     32  155  119   66  500  1.64   0.22  1   3.45  0.05  0.34  8.46 5800    0.0
   770630  1845199     45  456  335  190  500  0.813  0.28  9   9.71  0.04  0.09  1.31  772   32.5
   770630  1850212     49  425  313  205  500  1.87   0.11  9  12.5   0.02  0.17  3.43 2824   23.0
   770630  1730252     39  176  134   79  500  0.961  0.25  5   4.18  0.06  0.5214.5811932    0.0
   770630  1740253     43  280  209  133  500  2.05   0.34  0   5.05  0.04  0.26  5.09 5232   18.2
   770630  1740270     40  332  246  158  500  1.27   0.13  610.35  0.04  0.1310.47 6692   16.0
   770630  1740271     37  228  171   85  500  2.76   0.45  9   5.45  0.06  0.47  5.87 3656    0.0
   770630  1130272    107  466  343       50023.1                                 4.5 24500    0.0
   770630  1800276     35  197  149   79  500  1.75   0.35  7   2.70  0.06  0.6512.3510044    0.0
   770630  1820283     28  124   96   47  500  1.77   0.44  2   4.68  0.09  0.9017.60 8900    0.0
   770630 1905290    31  414  305  167  500 0.87   0.20 415.1   0.11 0.17  2.23   856  23.4
   770630 1900291    46  386  285  193  500 1.49   0.08 515.0   0.04 0.13  4.27  2280  16.7
   770630 1850293    33  407  300  212  500 1.67   0.18 723.5   0.04 0.22  4.98  2568  33.1
   770630 1050296    41  173  132   95  500 2.72   0.13 6 0.67  0.04 0.26  4.79  5312   0.0
   770630 1100296    31  122   95   66  500 3.52   0.25 5 0.59  0.05 0.39  5.91  5152   0.0
   770630 1105296    33  122   95   70  500 3.58   0.34 0 0.47  0.06 0.99  4.91  4904   0.0
   770630 1115296    32  106   83   44  500 2.76   0.34 0 0.49  0.04 0.77  4.68  3436   0.0
   770630 1230296    37  180  137   79  500 2.88   0.18 7 0.91  0.04 0.34  6.16  4536   0.0
   770630 1815296    32   63   52   32  500 2.59   0.44 2 1.00  0.06 0.86  4.54  4288   0.0
   770630 1110297    31   85   68   13  500 0.85   0.15 3 0.30  0.02 0.13  0.77   384   0.0
   770630 1240297    31   63   52   35  500 2.14   0.42 5 1.31  0.07 0.82  6.38  5464   0.0
   770630 1820297    30   95   75   38  500 1.24   0.27 2 4.20  0.04 0.65  2.35  1968   0.0
   770630 1755298    31  197  149   66  500 2.59   0.30 615.3   0.07 0.6916.81  2496   0.0
   770630 1155310   149 1036  753       50039.47                                2684  62.9
77JUL01   20
   770701 0625104    33  552  404  253   75 0.778 0.612 30.7   0.33 0.95  1.55   872  43.4
   770701 0635105    30  515  378  234  100 0.862 0.544 26.7   0.29 0.90  1.60   692  43.7
   770701 0635106    33  414  305  243   95 0.936 0.570 29.2   0.31 0.86  1.49   672  37.0
   770701 0635108    31  413  304  278   22 0.316 0.119 29.8   0.15 0.69  1.41   500  66.7
   770701 0635109    34  425  313  237   90 0.788 0.442 28.7   0.29 0.86  1.19   640  69.7
   770701 0650110    33  482  354  237  108 0.774 0.391 18.5   0.29 0.82  1.33   720  41.7
   770701 0655111    33  379  352  228   88 0.676 0.391 18.7   0.29 0.69  1.51   660  47.1
   770701 0700112    32  320  288  234  105 1.120 0.360 19.4   0.29 0.73  1.02   592  41.7
   770701 0715114    32  379  280  205  130 0.726 0.323 19.1   0.29 0.73  1.17   868  43.1
   770701 0720115    33  356  263  205  115 0.676 0.323 18.9   0.29 0.86  0.69   880  39.0
   770701 0730116    31  402  296  202  160 0.676 0.323 19.3   0.33 0.73  1.22   904  36.4
   770701 0740117    36  482  354  212  150 0.536 0.323 17.8   0.29 0.82  1.23   852  36.9
   770701 0800118    37  483  355  209  144 0.596 0.306 16.6   0.28 0.73  1.32   912  38.0
   770701 0810119    42  413  304  224   92 0.620 0.255 16.8   0.26 0.60  1.00   832  37.2
   770701 0815120    43  459  337  237  139 0.694 0.238 16.6   0.24 0.52  1.18   812  34.7
   770701 0830121    43  445  327  226  123 0.566 0.238 16.8   0.24 0.60  1.20   780  36.4
   770701 0835122    43  494  363  221   85 0.528 0.221 16.2   0.24 0.65  0.80   628  38.0
   770701 0840123    43  448  330  228  190 0.598 0.221 16.2   0.24 0.52  0.98   632  37.4
   770701 0625270    32  398  294  240   96 1.140 0.782 20.9   0.37 1.03  1.47   880  40.9
   770701 0625271    34  528  387  275   26 0.544 0.323 32.3   0.20 0.69  1.31   632  47.2
77JUL05   25
   770705 1650191   133  773  564  378  114 0.069 0.02     0.50 0.10 0.06  0.44   736143.5
   770705 1640192   145  674  492  342   85 0.046 0.02     0.88 0.12 0.06  0.24   656  82.8
   770705 1630193   188  674  492  388   31 0.484 0.26     4.21 0.19 0.07  0.58   696  78.9
   770705 1625194   115  517  379  287   48 0.087 0.02     2.35 0.25 0.03  0.32   572  71.7
   770705 1610195   114  425  313  258   78 0.066 0.03     4.36 0.24 0.03  0.22   500  59.1
   770705 1605196   111  482  354  255   50 0.098 0.02     3.62 0.18 0.05  0.30   452  61.4
   770705 1600197   105  459  337  249   80 0.075 0.01     4.77 0.23 0.06  0.26   496  58.2
   770705 1555198    86  472  347  214  135 0.093 0.04     4.36 0.24 0.17  0.13   508  57.2
   770705 1545199   110  472  347  246   84 0.082 0.01     4.61 0.19 0.09  0.26   536  57.6
   770705 1535200   111  475  349  255  144 0.102 0.01     5.11 0.29 0.09  0.31   512  63.4
   770705 1530201   101  497  365  249   82 0.100 0.01     5.51 0.29 0.11  0.29   544  64.1
   770705 1450203   121  485  356  265  125 0.122 0.01     5.26 0.14 0.23  0.17   572  60.7
   770705 1445204   130  485  356  284   70 0.153 0.05     5.66 0.14 0.17  0.23   564  61.9
   770705 1445205   117  464  341  271  100 0.106 0.01     6.64 0.16 0.23  0.12   492  61.9
   770705 1440206   115  485  356  270   78 0.096 0.01     6.14 0.26 0.09  0.31   448  61.1
   770705 1430207   113  475  349  262   84 0.076 0.04     5.96 0.24 0.11  0.19   500  61.9
   770705 1420208   109  474  348  252   92 0.076 0.04     6.41 0.19 0.17  0.13   524  61.4
   770705 1415209    94  475  349  242  130 0.098 0.01     6.37 0.23 0.09  0.31   504  66.6
   770705 1410210   115  517  379  271   44 0.060 0.02     6.10 0.30 0.06  0.34   456  63.4
   770705 1400211   108  507  372  262   78 0.047 0.02     6.20 0.02 0.06  0.34   452  61.9
   770705 1350212   110  529  388  265   76 0.060 0.02     6.10 0.30 0.06  0.34   460  65.4
   770705 1700214    97  455  335  239   34 0.049 0.02     9.36 0.24 0.06  0.54   364  56.9
C  770705 1725215   112  539  395  293   80 0.033 0.03     7.17 0.23 0.06  0.34   456  69.2
   770705 1715221   100  539  395  281   98 0.049 0.03     6.96 0.24 0.06  0.34   488  70.7
   770705 1525274   144  634  463  320   17 0.186 0.08    10.41 0.19 0.05  0.30   472  73.7
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77JUL07    21
  770707  1145170    52  551  404  262    35  0.058  0.02     8.51  0.18  0.17  1.18    504  83.4
  770707  1130171    76  505  371  274    70  0.062  0.02     1.57  0.13  0.22  0.38    456  57.1
  770707  1125172    75  472  347  262    52  0.044  0.02     0.19  0.08  0.13  0.27    472  57.4
  770707  1120173    52  393  290  253   100  0.050  0.02     0.19  0.08  0.30  0.20    464  58.4
  770707  1025174    64  436  321  293    74  0.046  0.02     0.18  0.09  0.22  0.28    468  58.7
  770707  1040175    59  431  317  275    58  0.054  0.02     0.72  0.08  0.17  0.13    464  60.7
  770707  1055176    58  443  326  272    58  0.048  0.02     0.86  0.09  0.22  0.28    436  62.7
  770707  1100177    70  351  332  300    53  0.052  0.02     1.09  0.08  0.17  0.38    448  60.1
  770707  0950179    59  436  321  281    62  0.073  0.02     2.61  0.15  0.13  0.47    424  59.4
  770707  0945180    65  540  396  297    66  0.087  0.02     2.61  0.15  0.13  0.52    488  63.4
  770707  0940181    56  490  360  275    75  0.073  0.02     7.61  0.13  0.13  0.47    448  63.4
  770707  0930182    63  515  378  300    83  0.069  0.02     6.07  0.08  0.09  0.51    400  56.1
  770707  0925183    58  479  352  281    70  0.044  0.02     4.82  0.06  0.13  0.42    412  54.7
  770707  0920184    51  440  324  262    60  0.033  0.02     4.29  0.06  0.09  0.36    404  57.1
  770707  0915185    62  489  359  294    60  0.046  0.02     4.39  0.06  0.26  0.29    440  53.4
  770707  0910186    69  502  368  294    74  0.077  0.02     3.77  0.10  0.13  0.42    444  58.4
  770707  0845187    71  565  414  269    55  0.054  0.02     2.45  0.20  0.17  0.38    480  62.4
  770707  0835188    59  528  387  272   114  0.056  0.02     2.26  0.18  0.09  0.21    412  58.4
  770707  0825189    61  540  396  300    38  0.042  0.02     5.26  0.15  0.26  0.09    384  63.1
  770707  0820190    61  553  405  300    34  0.071  0.02     5.26  0.15  0.22  0.18    432  62.4
C 770707  1140213    47  528  387  300    11  0.031  0.02     0.01  0.09  0.04  0.36    420  78.7
77JUL12    23/
  770712  1245130   1031263  917  280    38  0.149  0.04     0.01  0.03  0.22  0.63          70.7
  770712  1240131   1551054  765  278    72  0.211  0.04     0.01  0.05  0.39  0.26          73.2
  770712  1110132   165  820  597  297    76  0.202  0.01     0.01  0.06  0.13  0.47    652  59.6
  770712  1105133   170  586  645  300    68  0.098  0.01     0.01  0.06  0.13  0.32    624  74.6
  770712  1100134    87  718  524  300    95  0.087  0.01     0.01  0.06  0.13  0.32    668  80.4
  770712  1045138    78  718  524  288    73  0.064  0.01     0.01  0.05  0.30  0.15    600  77.9
  770712  1040139    80  718  524  300    46  0.029  0.01     0.01  0.05  0.17  0.33    572  73.6
  770712  1030140    70  599  438  265    74  0.016  0.01     0.01  0.05  0.13  0.37    752  75.4
  770712  1415144    59  527  386  231    75  0.060  0.02     0.04  0.07  0.22  0.43    668  65.1
  770712  1415145    65  586  429  250    90  0.102  0.02     0.04  0.07  0.22  0.43    672  72.2
  770712  1405146    61  689  503  269    75  0.022  0.01     0.04  0.07  0.13  0.27    596  74.6
  770712  1355147    62  674  492  265    92  0.116  0.01     0.04  0.07  0.13  0.27    684  76.8
  770712  1350148    67  552  404  281    39  0.095  0.01     0.04  0.07  0.17  0.23    632  79.2
  770712  1340149    88  562  412  234    36  0.086  0.01     0.04  0.07  0.13  0.62    596  78.1
  770712  1135150    83  562  412  264    47  0.104  0.01     0.01  0.07  0.13  0.32    568  79.9
  770712  1130151    81  540  396  259    28  0.082  0.01     0.01  0.07  0.17  0.33    536  78.8
  770712  1120152    64  517  379  231    84  0.098  0.01     0.01  0.07  0.13  0.47    656  78.1
  770712  1115153    51  540  396  205    69  0.076  0.01     0.01  0.07  0.17  0.23    540  74.2
  770712  1045154    38  574  420  272    29  0.076  0.01     0.01  0.07  0.13  0.22    508  73.7
  770712  1025155    79  574  420  253    25  0.086  0.01     0.01  0.07  0.13  0.37    620  68.6
  770712  1005156    87  562  412  259    64  0.106  0.01     0.01  0.07  0.13  0.27    524  71.9
  770712  0955157    35  528  387  246    52  0.364  0.05     4.13  0.07  0.30  0.40    536  62.1
  770712  1000220    72  528  387  231    60  0.229  0.02     2.30  0.12  0.26  0.44    388  62.6
77JUL13     9
  770713  1515124    74  879  640  284    52  0.189  0.051    0.03  0.07  0.43  0.22    660  60.7
  770713  1505125    78  820  597  275    43  0.173  0.051    0.01  0.06  0.39  0.26    720  64.4
  770713  1500126    77  820  597  300    75  0.185  0.051    0.03  0.07  0.43  0.57    732  63.1
  770713  1350127    80  736  537  278    90  0.102  0.034    0.01  0.02  0.22  0.43    620  54.4
  770713  1345128    671317  955  275    70  0.212  0.034    0.01  0.04  0.22  1.07   1140  83.1
  770713  1345129    81  820  597  300    85  0.137  0.051    0.01  0.02  0.39  0.26    796  70.4
  770713  0920141    53  689  502  250    65  0.079  0.02     0.08  0.02  0.26  0.34    560  71.4
  770713  0915142    61  703  513  262    54  0.064  0.02     0.08  0.02  0.17  0.43    608  68.7
  770713  0910143    72  773  564  300    42  0.052  0.02     0.07  0.03  0.13  0.37    592  68.7
77AUG08    24
  770808  1415191    58  459  337  269    90  0.074  0.017    6.66  0.22  0.30  0.50    524  72.7
  770808  1410192    39  335  248  180    25  0.092  0.020    1.98  0.22  0.17  0.33    416  57.2
  770808  1400193    70  503  369  275    25  0.596  0.540    4.53  0.31  0.61  0.89    452  73.1
  770808  1355194    58  491  361  276    42  0.108  0.06     7.26  0.22  0.30  0.30    484  70.7
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  770808  1340195    81 380 281 226   46 0.096 0.02    3.26 0.26 0.09 0.31   344  53.9
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  770808  1215197    61 417 307 221   48 0.078 0.02    0.02 0.03 0.17 0.48   388  61.4
  770808  1210198    55 429 316 193   54 0.204 0.04    0.07 0.04 0.05 0.50   384  51.6
  770808  1140199    68 539 395 243   88 0.836 0.38    1.97 0.12 0.65 0.35   480  60.1
  770808  1150200    54 457 336 243   49 0.196 0.04    0.01 0.05 0.30 0.10   464  68.1
  770808  1155201    58 390 288 253   68 0.168 0.02    0.06 0.05 0.30 0.20   472  71.4
  770808  1115203    58 393 290 231   85 0.220 0.04    0.01 0.04 0.12 0.43   456  67.6
  770808  1110204    60 380 281 234   72 0.234 0.03    0.01 0.04 0.22 0.23   444  68.1
  770808  1105205    54 405 299 234   80 0.212 0.03    0.01 0.04 0.17 0.43   496  64.9
  770808  1100206    60 466 343 253   86 0.160 0.03    0.02 0.03 0.17 0.33   428  64.1
  770808  1055207    50 405 299 186  430 0.600 0.04    0.07 0.04 0.30 1.00  1200  52.9
  770808  1045208    46 393 290 183   39 0.186 0.02    0.07 0.04 0.09 0.56   652  49.2
  770808  1040209    44 380 281 167   78 0.138 0.02    0.06 0.05 0.17 0.83   956  50.2
  770808  1035210    54 431 317 215   31 0.214 0.02    0.01 0.05 0.09 0.56   532  61.1
C 770808  1030211    54 468 344 237   25 0.100 0.02    0.01 0.05 0.13 1.07   468  67.4
  770808  1020212    64 504 370 253   60 0.262 0.04    0.01 0.05 0.43 0.27   480  71.7
C 770808  1325215    74 491 361 259   80 0.096 0.01    0.01 0.05 0.43 0.13   476  53.9
C 770808  1320221    82 515 378 259   88 0.110 0.01    0.01 0.05 0.34 0.16   484  52.9
  770808  1145274    72 431 317 205   50 0.146 0.03    0.06 0.05 0.13 0.42   360  48.6
77AUG09   22
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  770809  1145171    69 603 441 275   75 0.243 0.06    0.22 0.15 0.69 0.31   476  66.4
  770809  1140172    63 490 360 253   62 0.116 0.02    0.06 0.15 0.30 0.55   444  55.4
  770809  1135173    60 502 368 243   54 0.131 0.02    0.08 0.13 0.52 0.23   424  53.4
  770809  1130174    59 477 350 237   78 0.127 0.02    0.24 0.13 0.26 0.54   416  52.7
  770809  1050175    61 489 359 228   92 0.123 0.02    0.45 0.08 0.34 0.16   416  48.0
  770809  1045176    58 489 359 243   80 0.092 0.02    0.15 0.06 0.26 0.24   428  43.4
  770809  1035177    69 450 331 234  110 0.118 0.02    0.06 0.04 0.26 0.14   428  44.7
  770809  1030178    59 440 324 224  115 0.108 0.02    0.06 0.04 0.43 0.07   532  43.1
  770809  1025179    65 440 324 234   73 0.112 0.02    0.05 0.02 0.17 0.33   492  43.4
  770809  1020180    65 424 312 209  105 0.088 0.02    0.05 0.02 0.22 0.23   480  41.1
  770809  1015181    55 424 312 215   85 0.123 0.02    0.03 0.02 0.43 0.17   492  40.7
  770809  1010182    64 450 331 218   62 0.120 0.02    0.05 0.02 0.65 0.10   448  38.4
  770809  1005183    58 393 290 180   95 0.123 0.02    0.02 0.03 0.34 0.36   460  38.7
  770809  1000184    50 393 290 193   68 0.137 0.02    0.02 0.03 0.22 0.38   448  40.0
  770809  0955185    62 414 305 205  155 0.153 0.02    0.02 0.03 0.39 0.21   444  41.7
  770809  0950186    68 373 276 167   50 0.141 0.02    0.06 0.04 0.26 0.29   384  41.4
  770809  0930187    71 502 368 228   50 0.151 0.02    0.01 0.09 0.05 0.50   444  46.7
  770809  0925188    60 514 377 228   75 0.137 0.02    0.01 0.09 0.15 0.45   440  71.7
  770809  0920189    60 553 405 269   32 0.108 0.02    0.06 0.04 0.30 0.30   544  50.4
C 770809  0915190    61 514 377 250   65 0.135 0.02    0.04 0.04 0.39 0.16   436  53.7
C 770809  1200213    46 408 301 199   44 0.135 0.02    0.13 0.13 0.26 0.34   372  53.7
77AUG10   22
  770810  0840104    53 463 340 164  310 1.89  1.42    3.59 0.44 3.10 0.15  1148  30.9
  770810  0855105    50 417 307 139  270 1.84  0.98    1.17 0.42 3.14 0.36  1156  31.5
  770810  0855106    50 417 307 149  330 1.79  0.93    1.39 0.31 3.23 0.22  1184  28.9
  770810  0900108    46 352 332 142  360 1.21  0.42    1.37 0.11 0.82 1.23  1188  37.5
  770810  0900109    36 244 183  79  450 1.84  0.85    0.08 0.13 1.63 0.33   988  17.2
  770810  0905110    84 900 655 278  325 2.32  0.95    0.02 0.40 1.60 1.50  1268  76.1
  770810  0915111    97 900 655 326  148 0.676 0.62    3.03 0.26 0.17 1.33   816  69.4
  770810  0920112    69 566 415 243   98 1.04  0.39    1.73 0.07 1.46 0.14   684  59.7
  770810  0930113    80 772 563 280   66 0.429 0.23    0.01 0.13 0.73 1.07   700 100.1
  770810  0940114    83 754 550 300  130 0.398 0.10    0.01 0.11 0.47 1.13   888  56.4
  770810  0945115    77 754 550 262  136 0.645 0.47    0.05 0.06 0.10 1.20   684  63.1
  770810  0955116    74 599 438 240   75 1.09  0.78    0.12 0.02 0.10 1.30   540  63.7
  770810  1005117    94 491 361 171   53 0.627 0.42    0.07 0.07 0.10 0.45   436  43.7
  770810  1020118   116 838 610 269   38 1.22  1.07    0.01 0.08 0.12 0.78   604  66.1
  770810  1035119    91 718 524 278   31 0.521 0.32    0.01 0.11 0.07 0.18   572  53.7
  770810  1040120    84 736 537 275   48 0.523 0.27    0.01 0.08 0.10 0.70   568  51.7
  770810  1050121    90 736 537 288   38 0.496 0.27    0.01 0.08 0.11 0.69   624  55.1
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   770810 1055122    94 736 537 297  58 0.512 0.23   0.01 0.08 0.09 0.66  660 52.7
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   770810 0335253    65 479 352 205 360 3.46  2.35   6.60 0.88 0.30 1.70 1684 38.2
   770810 0835270    64 419 309 177 210 1.37  0.91   0.78 0.48 2.49 1.01 1040 35.0
   770810 0840271    53 375 277 126 490 1.68  0.98   2.46 0.29 1.55 2.65 1064 21.9
77AUG11   40
   770811 1505124   118 662 484 278  99 0.522 0.08   0.71 0.29 0.86 0.19  592 71.9
   770811 1500125   118 662 484 272  65 0.395 0.05   0.44 0.34 0.60 0.40  564 71.9
   770811 1455126   131 674 492 300  62 0.391 0.06   0.40 0.35 0.47 0.53  537 72.4
   770811 1445127   119 689 503 284  55 0.331 0.04   0.28 0.35 0.30 0.65  532 70.1
   770811 1445128   123 551 404 256  76 0.482 0.10   0.46 0.48 0.43 0.32  512 57.6
   770811 1440129   107 528 387 228  85 0.355 0.04   0.05 0.29 0.26 0.54  504 64.1
   770811 1435130   117 574 420 243 140 0.506 0.04   0.41 0.24 0.47 0.43  556 62.9
   770811 1430131   133 689 503 278  83 0.453 0.06   0.29 0.24 0.43 0.57  564 67.7
C  770811 1425132   108 540 396 234  99 0.329 0.03   0.20 0.18 0.26 0.44  444 60.4
   770811 1420133   119 562 412 272  62 0.266 0.02   0.32 0.18 0.26 0.54  548 71.9
   770811 1415134    99 541 397 205 110 0.295 0.02   0.35 0.15 0.26 0.44  456 62.9
   770811 1400137   114 552 404 223  85 0.293 0.18   0.91 0.29 0.29 0.46  508 70.1
   770811 1340138   121 552 404 250 123 0.324 0.14   0.92 0.28 0.26 0.49  524 67.1
   770811 1335139   120 551 404 246  89 0.291 0.15   0.89 0.31 0.34 0.46  528 67.7
C  770811 1325140   122 551 404 239  92 0.311 0.16   0.90 0.30 0.40 0.30  492 68.9
   770811 1315141   122 562 412 242 100 0.319 0.15   0.88 0.32 0.40 0.30  472 68.9
   770811 1310142   134 515 378 255  64 0.280 0.15   0.90 0.30 0.37 0.33  456 67.6
   770811 1305143   125 527 386 238  92 0.304 0.14   0.89 0.31 0.34 0.41  472 67.7
   770811 1155144   130 479 352 255  78 0.306 0.14   0.79 0.31 0.23 0.42  428 65.9
   770811 1145145   120 479 352 230 108 0.313 0.17   0.78 0.32 0.17 0.43  436 65.7
   770811 1135146   135 586 429 246 122 0.311 0.16   0.74 0.26 0.71 0.09  344 63.4
   770811 1130147   125 540 396 236  90 0.319 0.19   0.72 0.28 0.51 0.14  320 62.1
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   770811 1120149   135 486 357 249 102 0.360 0.21   1.00 0.20 0.63 0.12  356 62.9
   770811 1020150   133 552 404 246 122 0.366 0.21   0.91 0.19 0.10 0.60  428 62.9
   770811 1010151   143 689 503 260  60 0.348 0.23   1.06 0.14 0.07 0.63  400 63.1
   770811 1000152   127 586 429 233  95 0.329 0.15   1.23 0.23 0.05 0.50  296 61.1
   770811 0955153   135 586 429 249 124 0.342 0.17   1.10 0.20 0.09 0.56  340 62.9
   770811 0945154   129 527 386 250 126 0.360 0.15   1.06 0.19 0.05 0.60  244 60.4
C  770811 0930155   148 599 438 265  75 0.340 0.22   1.58 0.22 0.06 0.54  572 65.7
   770811 0915156   144 599 438 262 100 0.342 0.19   1.88 0.22 0.06 0.54  588 64.9
   770811 0950157   114 457 336 198 126 0.353 0.20   0.63 0.17 0.08 0.52  416 42.9
   770811 1605191    58 187 142  80 500 0.899 0.04   1.78 0.22 0.11 0.89 1848 22.6
   770811 1410193    65 281 209 126 370 0.902 0.16   4.51 0.29 0.20 0.95 1232 19.0
   770811 1620195   102 390 288 198  92 0.226 0.06   3.96 0.24 0.14 0.26  448 43.7
   770811 1425196   103 431 317 191  55 0.351 0.15   0.66 0.24 0.29 0.06  500 45.7
   770811 1435199    69 375 277 153 180 0.331 0.24   1.01 0.19 0.46 0.14  404 43.4
   770811 1440212    97 416 307 191 500 0.586 0.08   0.98 0.22 0.09 0.81  932 45.8
   770811 1600214    46 184 139  89 500 2.84  0.36   4.70 0.20 0.40 5.85  392 10.9
   770811 9910220   147 689 503 287  64 0.491 0.23   2.88 0.32 0.46 0.44  692 66.2
77AUG29   26
   770829 1530162   168 534 391 290 155 0.863 0.71   2.79 0.36 0.97 1.33  592 63.8
   770829 1520165   163 561 411 255 200 0.766 0.54   0.01 0.47 0.66 1.74  612 57.6
   770829 1510169   131 447 329 204 500 0.649 0.46   0.01 0.29 1.03 0.22  688 52.2
   770829 1505170   133 535 392 204 500 0.614 0.23   0.01 0.31 0.31 0.80  688 56.6
   770829 1450171   157 502 368 268 255 0.297 0.21   0.01 0.17 0.46 0.34  576 62.3
   770829 1445172   178 556 407 284 140 0.086 0.01   0.01 0.10 0.23 0.37  484 57.9
   770829 1440173   172 550 403 274 135 0.216 0.10   0.01 0.10 0.17 0.43  576 67.3
   770829 1435174   147 453 333 254 162 0.186 0.08   0.01 0.12 0.17 0.33  468 54.9
   770829 1345175   169 539 395 274  86 0.143 0.05   0.01 0.12 0.11 0.34  500 48.6
   770829 1340176   179 539 395 282  85 0.145 0.06   0.01 0.10 0.31 0.04  520 46.2
   770829 1335177   181 539 395 276  95 0.113 0.04   0.01 0.07 0.17 0.18  460 49.2
   770829 1330178   195 552 404 297  80 0.119 0.04   0.01 0.07 0.11 0.19  476 46.8
   770829 1325179   183 528 387 210  72 0.143 0.07   0.01 0.05 0.14 0.11  452 50.0
   770829 1320180   190 524 384 284  62 0.287 0.05   0.01 0.05 0.14 0.16  456 51.9
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  770829  1315181   168  518  380  260  100  0.162  0.05     0.01  0.04  0.14  0.21    472  49.2
  770829  1310182   182  539  395  274   86  0.265  0.06     0.01  0.05  0.23  0.27    464  50.0
  770829  1305183   175  471  346  262  120  0.289  0.08     0.01  0.07  0.23  0.27    464  45.1
  770829  1300184   175  508  373  260  120  0.228  0.04     0.01  0.05  0.20  0.30    488  50.0
  770829  1255185   168  487  358  231  130  0.222  0.07     0.01  0.04  0.24  0.21    460  48.6
  770829  1250186   170  482  354  237  151  0.220  0.12     0.01  0.05  0.30  0.20    464  45.5
  770829  1235187   149  513  376  196   82  0.261  0.11     0.01  0.14  0.51  0.09    404  38.0
  770829  1230188   147  534  391  199   70  0.170  0.07     0.01  0.12  0.54  0.06    392  43.0
  770829  1225189   167  555  407  259   65  0.127  0.05     2.06  0.14  0.24  0.31    488  52.2
C 770829  1220190   166  546  400  262   68  0.152  0.05     2.63  0.15  0.18  0.27    504  58.5
C 770829  1500213   122  420  381  202  250  0.123  0.04     0.01  0.07  0.30  0.10    432  54.6
  770829  1530272   152  518  380  246   32  0.481  0.29     3.11  0.37  0.54  0.31    492  63.8
77AUG30    25
  770830  1355191   230  777  566  346  105  0.467  0.04     0.30  0.16  1.14  0.06    612109.8
  770830  1350192   182  634  463  254   72  0.071  0.01     0.19  0.16  0.06  0.34    508 73.8
  770830  1345193   194  634  463  240   68  0.141  0.05     0.01  0.19  0.42  0.08    544  67.6
  770830  1340194   179  581  425  281   50  0.059  0.01     0.01  0.08  0.15  0.15    432  63.5
  770830  1320195   180  507  372  262   63  0.050  0.01     0.01  0.08  0.18  0.02    364  50.9
  770830  1205196   178  496  364  240   68  0.101  0.02     0.01  0.05  0.12  0.23    340  50.9
  770830  1200197   168  459  337  212   64  0.069  0.02     0.01  0.03  0.30  0.01    324  50.2
  770830  1155198   144  501  368  218   57  0.107  0.02     0.01  0.07  0.24  0.11    324  56.9
  770830  1150199   170  550  403  259   42  0.188  0.06     0.01  0.11  0.36  0.24    364  59.2
  770830  1140200   167  545  399  265   55  0.162  0.05     0.01  0.12  0.30  0.05    700  67.1
  770830  1135201   168  576  422  259   60  0.220  0.03     0.01  0.14  0.18  0.17    384  65.9
  770830  1105203   186  576  422  281   66  0.150  0.02     0.01  0.12  0.21  0.14    408  65.9
  770830  1100204   185  544  399  261   95  0.147  0.02     0.01  0.12  0.15  0.25    396  60.1
  770830  1055205   196  587  430  300   72  0.170  0.02     0.32  0.14  0.12  0.28    396  66.2
  770830  1050206   176  550  403  281   80  0.133  0.02     0.21  0.14  0.12  0.28    348  68.8
  770830  1045207   189  534  391  291   66  0.137  0.02     0.21  0.14  0.12  0.33    372  65.2
  770830  1035208   190  581  425  294   85  0.180  0.04     0.15  0.14  0.12  0.33    360  66.2
  770830  1025209   189  550  403  281  104  0.137  0.03     0.15  0.14  0.12  0.13    364  62.9
  770830  1020210   166  518  380  269   54  0.145  0.04     0.09  0.14  0.09  0.26    356  65.9
C 770830  1015211   186  550  403  278   92  0.147  0.05     0.09  0.14  0.09  0.26    348  63.2
  770830  1000212   189  601  440  268   78  0.167  0.05     0.09  0.14  0.09  0.26    372  66.8
  770830  1400214   152  492  361  253   42  0.122  0.01     0.01  0.18  0.06  0.39    256  45.5
C 770830  1310215   177  550  403  278   63  0.084  0.01     0.01  0.01  0.12  0.28    420  62.9
C 770830  1300221   190  634  463  289   69  0.067  0.01     0.01  0.01  0.12  0.23    400  68.3
C 770830  1145274   210  642  469  250   22  0.384  0.16     3.17  0.14  0.12  0.28    440  78.6
77AUG31    33
  770831  1610124   199  761  555  272  105  0.414  0.13     0.01  0.14  0.42  0.33    744  68.1
  770831  1605125   208  785  572  272   30  0.265  0.13     0.01  0.15  0.24  0.56    544  69.8
  770831  1600126   180  755  551  250   52  0.212  0.10     0.01  0.11  0.18  0.52    540  70.3
  770831  1540127   164  711  519  228   86  0.155  0.05     0.01  0.01  0.18  0.62    508  69.6
  770831  1540128   237  927  674  258  105  0.272  0.12     0.01  0.27  0.21  0.59    600  64.6
  770831  1535129   174  748  546  234   65  0.212  0.08     0.01  0.08  0.18  0.52    364  71.2
  770831  1530130   170  751  548  220   98  0.290  0.13     0.01  0.08  0.30  0.40    316  73.3
  770831  1525131   166  718  524  215   88  0.220  0.08     0.01  0.05  0.18  0.57    312  69.3
C 770831  1505132   180  563  412  231   90  0.147  0.02     0.01  0.08  0.12  0.38    260  77.2
  770831  1500133   181  651  476  246   83  0.137  0.03     0.01  0.11  0.12  0.43    240  74.9
  770831  1455134   170  636  465  246   78  0.139  0.02     0.01  0.11  0.15  0.35    292  70.5
  770831  1445137   216  673  492  284  116  0.149  0.02     0.09  0.14  0.09  0.36    500  76.2
  770831  1410138   204  676  494  278  100  0.133  0.02     0.14  0.15  0.12  0.38     88  79.2
  770831  1400139   198  658  481  283   75  0.129  0.03     0.09  0.14  0.12  0.33    128  73.1
C 770831  1355140   202  662  484  265  117  0.135  0.02     0.01  0.14  0.12  0.38     84  75.1
  770831  1340141   185  647  473  259   72  0.143  0.05     0.01  0.14  0.12  0.38     68  76.2
  770831  1335142   184  655  479  253  100  0.139  0.03     0.01  0.14  0.12  0.33     44  75.9
  770831  1330143   179  644  471  259   85  0.135  0.03     0.01  0.14  0.15  0.35    120  70.7
  770831  1215144   181  636  465  232   84  0.120  0.05     0.01  0.14  0.12  0.43    100  73.6
  770831  1205145   176  607  444  232   92  0.139  0.05     0.01  0.14  0.12  0.33    556  72.4
  770831  1200146   176  625  457  235   79  0.127  0.05     0.01  0.14  0.12  0.28    524  77.2
  770831  1155147   191  655  479  253   90  0.249  0.03     0.01  0.15  0.15  0.30    556  72.0
  770831 1150148  179 647 473 251 104 0.229 0.05   0.02 0.16 0.15 0.35  528 68.6
  770831 1140149  185 662 484 259  84 0.223 0.05   0.07 0.16 0.12 0.28  532 67.9
  770831 1050150  178 630 461 251  83 0.175 0.05   0.19 0.16 0.18 0.27  484 66.4
  770831 1040151  163 607 444 221  96 0.238 0.05   0.13 0.16 0.18 0.32  500 66.6
  770831 1030152  179 607 444 232  94 0.227 0.05   0.07 0.16 0.24 0.26  112 65.7
  770831 1025153  178 590 432 230  80 0.209 0.07   0.07 0.16 0.12 0.39  488 62.3
  770831 1015154  166 607 444 227  76 0.180 0.07   0.07 0.16 0.12 0.43  492 67.3
C 770831 0955155  161 562 412 226  99 0.202 0.07   0.01 0.16 0.12 0.28  504 67.3
  770831 0940156  186 618 452 235  87 0.165 0.06   0.01 0.16 0.15 0.40  516 62.3
  770831 0930157  157 567 415 226  60 0.407 0.17   0.56 0.14 0.24 0.36  488 62.3
  770831 0935220  180 624 456 229 100 0.184 0.05   0.02 0.15 0.18 0.37  492 63.5
77SEP02  19
  770902 0900104  248 828 603 320 125 1.15  0.901  4.42 0.94 0.30 2.55  688 97.8
  770902 0905105  261 878 639 306 210 0.879 0.323  1.75 1.05 2.90 1.55  700117.7
  770902 0910106  288 920 669 335 136 0.931 0.410  3.16 1.00 0.06 4.15  732111.9
  770902 0915108  176 645 471 306  64 0.338 0.153  3.94 0.30 0.05 1.75  564130.8
  770902 0920109  281 871 634 320  62 0.369 0.136  0.93 0.27 0.15 0.90  676118.5
  770902 0925110  263 905 659 330  60 0.670 0.476  0.01 0.24 0.23 0.67  708119.1
  770902 0935111  243 892 649 306 135 0.551 0.48   0.01 0.26 1.13 0.47  672 90.0
  770902 0940112  274 969 705 315 133 0.321 0.27   0.01 0.11 1.26 0.14  752 87.3
  770902 1000113  203 736 537 286 174 0.318 0.41   0.01 0.11 0.44 0.36  580 95.1
  770902 1005114  204 871 634 286 280 0.291 0.39   0.01 0.02 0.82 4.13  732 88.0
  770902 1010115  2541123 817 284 120 0.660 0.71   0.01 0.05 5.01 0.34  864 97.1
  770902 1020116  223 811 591 313  88 1.06  1.06   0.52 0.18 2.08 0.12  644 95.1
  770902 1030117  2481129 821 309  72 0.981 1.05   0.01 0.28 2.01 0.99  780 88.0
  770902 1040118  2611043 757 297 174 0.958 0.72   0.01 0.30 0.17 1.48  780 88.0
  770902 1110119  248 859 625 313  66 0.433 0.24   0.01 0.09 0.16 0.59  636 68.5
  770902 1115120  238 798 582 310  88 0.393 0.24   0.01 0.07 0.32 0.43  620 68.5
  770902 1125121  251 859 625 320  85 0.378 0.21   0.01 0.05 0.25 0.60  640 78.4
  770902 1130122  239 736 537 313 164 0.529 0.21   0.01 0.08 0.32 0.13  708 69.4
  770902 1135123  228 834 607 313 126 0.346 0.21   0.01 0.05 0.38 0.32  664 76.0
77SEP12  23
  770912 1530191  260 843 614 315 130 0.177 0.05   0.01 0.03 2.46 0.34  540103.8
  770912 1525192  260 710 518 315  94 0.092 0.01   0.01 0.01 0.06 0.19  556104.5
  770912 1515193  276 746 544 328  35 0.670 0.43   0.01 0.05 2.11 2.59  516 78.2
  770912 1505194  217 599 438 272  62 0.075 0.01   0.01 0.03 0.06 0.34  436 63.5
  770912 1455195  179 416 307 213  71 0.042 0.01   0.01 0.01 0.03 0.17  328 55.3
  770912 1425196  209 568 416 253  46 0.123 0.02   0.01 0.01 0.06 0.19  412 55.3
  770912 1420197  180 744 543 227 106 0.092 0.06   0.01 0.01 0.18 0.57  516 71.7
  770912 1415198  161 574 420 221  79 0.084 0.01   0.01 0.03 0.18 0.32  464 64.1
  770912 1410199  174 703 513 241  38 0.280 0.12   0.01 0.01 0.66 0.34  476 68.3
  770912 1405200  162 746 544 243  34 0.133 0.05   0.01 0.04 0.36 0.44  476 79.2
  770912 1400201  157 726 530 239  36 0.124 0.06   0.01 0.01 0.33 0.32  504 81.1
  770912 1325203  154 586 429 207  80 0.121 0.05   0.01 0.01 0.15 0.30  164 67.9
  770912 1320204  148 515 378 181 105 0.079 0.02   0.01 0.01 0.09 0.31  160 59.9
  770912 1315205  176 586 429 239  84 0.081 0.03   0.01 0.01 0.12 0.33  228 75.9
  770912 1310206  130 539 395 193  68 0.036 0.01   0.01 0.01 0.06 0.34  168 71.5
  770912 1305207  145 597 437 231  40 0.035 0.01   0.01 0.01 0.06 0.44  280 72.3
  770912 1255208  157 586 429 231 173 0.136 0.07   0.01 0.01 0.18 0.27  320 68.3
  770912 1250209  149 579 424 231  88 0.075 0.02   0.01 0.01 0.12 0.38  184 75.5
  770912 1245210  163 585 429 250  64 0.035 0.01   0.01 0.01 0.09 0.31  164 69.1
C 770912 1240211  164 586 429 243  96 0.063 0.02   0.01 0.01 0.12 0.36  200 75.3
  770912 1215212  215 658 481 277  74 0.061 0.01   0.01 0.01 0.15 0.35  264 53.6
C 770912 1450215  175 601 440 275  74 0.033 0.01   0.01 0.01 0.06 0.19  308 45.8
C 770912 1440221  196 620 453 291  67 0.042 0.01   0.01 0.01 0.09 0.16  276 79.5
77SEP14  47
  770914 1310104  177 499 366 286  92 0.684 0.66   7.23 0.19 0.69 0.51  420 65.2
  770914 1315105  170 510 374 283 134 0.743 0.63   6.65 0.32 0.54 0.21  416 66.4
  770914 1320106  176 523 384 286  86 0.728 0.65   6.38 0.34 0.57 1.13  400 65.9
  770914 1320108  142 528 387 219  79 0.253 0.09   1.84 0.12 0.13 0.92  292 56.3
  770914 1325109  171 517 379 273  94 0.584 0.57   5.81 0.35 0.47 1.23  360 60.8
  770914  1330110   172  527  386  273  104  0.808  0.69    5.66  0.36  0.69  1.31    392  70.5
  770914  1335111   152  486  357  243  100  0.767  0.62    6.44  0.42  0.60  1.20    368  65.4
  770914  1340113   148  498  366  249  210  0.941  0.80    5.68  0.34  0.63  1.47    408  64.1
  770914  1345114   142  434  319  233  200  0.970  0.75    5.58  0.30  0.57  1.03    432  31.8
  770914  1350115   137  425  313  229  130  0.934  0.74    4.49  0.27  0.66  0.74    356  57.6
  770914  1355116   140  504  370  233  225  0.924  0.78    5.86  0.30  0.72  0.93    400  62.3
  770914  1405117   158  462  412  266  156  0.979  0.65    5.21  0.32  0.91  0.44    412  67.1
  770914  1415118   150  574  420  246  174  0.913  0.63    4.97  0.35  0.69  0.56    436  59.2
  770914  1440119   156  562  412  249  135  0.786  0.51    4.30  0.32  0.44  0.71    424  57.2
  770914  1445120   151  480  353  243  140  0.803  0.54    4.16  0.32  0.57  0.48    448  61.4
  770914  1450121   143  510  374  226  200  0.637  0.53    3.37  0.27  0.57  0.88    444  55.9
  770914  1455122   148  563  412  239  160  0.722  0.48    3.90  0.30  0.63  0.72    440  58.2
  770914  1500123   145  486  357  236  184  0.731  0.51    3.89  0.31  0.57  0.68    444  58.8
  770914  1150162   183  480  353  297   56  0.514  0.44    3.84  0.08  0.32  1.13    392  67.1
  770914  1200163   179  718  524  260   56  0.622  0.54   10.14  0.22  0.63  0.92    504  73.8
C 770914  1140165   158  497  365  283  116  0.529  0.38    8.58  0.24  0.41  1.34    400  66.6
  770914  1135169   115  417  307  111  116  0.595  0.47    6.91  0.11  0.44  1.01    331  47.9
  770914  1130170   125  417  307  212  109  0.548  0.47    5.41  0.19  0.38  1.12    304  49.2
  770914  1110171   136  386  285  212  118  0.480  0.32    4.34  0.14  0.25  1.20    292  45.1
  770914  1105172   131  375  277  209  114  0.450  0.27    3.78  0.14  0.22  1.03    292  41.1
  770914  1100173   133  378  279  212  130  0.471  0.33    3.78  0.14  0.25  0.85    272  39.5
  770914  1055174   133  399  294  209  106  0.412  0.32    3.64  0.14  0.25  0.75    204  40.7
  770914  1025175   126  321  238  185  146  0.452  0.33    3.36  0.14  0.25  1.55    212  38.0
  770914  1020176   128  368  272  192  145  0.547  0.36    3.57  0.14  0.28  1.22    212  37.6
  770914  1015177   122  319  237  189  150  0.483  0.35    3.99  0.14  0.28  0.97    124  37.2
  770914  1010178   111  270  201  165  134  0.557  0.33    1.57  0.11  0.20  1.00     68  31.5
  770914  1005179   119  337  250  189  132  0.493  0.33    3.08  0.14  0.28  0.87     68  39.5
  770914  1000180   120  356  263  199  148  0.663  0.35    3.08  0.14  0.27  0.83    108  37.2
  770914  0955181   118  320  237  185  146  0.520  0.30    3.08  0.14  0.25  0.95    152  35.0
  770914  0950182   123  314  233  192  155  0.545  0.36    3.01  0.14  0.25  0.85    100  36.2
  770914  0945183   122  319  237  192  200  0.629  0.33    2.94  0.14  0.19  1.01    768  35.3
  770914  0940184   119  340  252  179  154  0.534  0.33    2.87  0.14  0.25  1.00    504  33.7
  770914  0935185   122  350  259  182  180  0.592  0.36    2.53  0.13  0.22  0.93    468  30.5
  770914  0930186   118  318  236  175  200  0.580  0.36    3.43  0.14  0.22  0.98    476  36.0
  770914  0925187   120  308  229  182  185  0.669  0.36    2.65  0.15  0.25  1.05    516  32.1
  770914  0920188   115  355  263  175  210  0.665  0.36    2.37  0.15  0.25  0.90    488  34.2
  770914  0915189   119  347  257  192  240  0.654  0.36    2.50  0.16  0.32  0.98    512  35.3
C 770914  0910190   121  327  242  195  190  0.518  0.32    2.73  0.14  0.28  0.92    472  32.8
C 770914  1120213   136  364  269  222   90  0.235  0.06    2.45  0.07  0.13  0.77    408  38.4
  770914  1300270   186  628  459  244   92  0.968  0.34    7.70  0.14  0.32  0.78    552  66.2
  770914  1305271   172  564  413  290  100  0.615  0.42    8.12  0.14  0.32  1.73    552  56.9
  770914  1150272   177  546  400  242   55  0.380  0.20    7.78  0.20  0.19  0.86    536  71.0
77SEP16   33
  770916  1540124   159  557  408  270  155  0.543  0.32    3.85  0.35  0.28  1.52    512  52.6
  770916  1535125   159  505  371  263  134  0.547  0.30    3.86  0.34  0.25  0.60    456  54.9
  770916  1530126   163  522  383  270  162  0.252  0.18    3.74  0.32  0.25  0.85    480  55.6
  770916  1510127   167  485  356  280  144  0.310  0.21    3.76  0.30  0.32  0.68    464  55.6
  770916  1510128   201  691  505  283   50  0.359  0.26    6.88  0.54  0.09  0.66    516  61.1
  770916  1505129   176  502  368  283   78  0.522  0.27    4.38  0.38  0.19  0.56    476  54.3
  770916  1455130   165  479  352  270  160  0.925  0.80    4.07  0.41  0.44  0.31    460  47.2
  770916  1450131   181  570  417  290  116  0.86L  0.70    4.17  0.45  0.38  0.52    476  52.2
  770916  1440132   179  539  395  307   89  0.766  0.59    5.17  0.43  0.22  0.78    476  58.8
  770916  1435133   181  533  391  300   94  0.646  0.50   10.57  0.35  0.25  0.65    448  51.9
  770916  1430134   173  515  373  297   78  0.613  0.44    5.11  0.35  0.16  0.74    472  52.6
  770916  1355137   179  539  395  307   90  0.627  0.51    5.18  0.35  0.22  0.03    464  54.6
  770916  1350138   171  474  348  293  122  0.652  0.48    5.12  0.34  0.22  0.73    472  56.3
  770916  1345139   176  483  355  297  120  0.644  0.54    4.97  0.35  0.22  0.93    416  54.2
  770916  1335140        132  102   67  315  0.757  0.47    0.16  0.04  0.38  0.42    264  00.0
  770915  1325141   172  562  412  297  116  0.499  0.51    4.83  0.35  0.19  0.86    372  58.2
  770916  1320142   178  538  394  270  100  0.580  0.39    4.73  0.31  0.22  0.83    444  53.6
  770916  1315143   180  509  373  229  109  0.568  0.42    5.22  0.38  0.22  0.68    416  51.9
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   770916  1205144   171  497  365  219   90  0.592  0.33     4.32  0.44  0.16  0.74    408  55.6
   770916  1155145   179  521  382  229  120  0.577  0.39     4.38  0.38  0.19  0.56    420  55.3
   770916  1150146   160  443  326  195  106  0.575  0.34     3.48  0.36  0.16  0.74    292  45.8
   770916  1145147   183  503  369  226  132  0.609  0.39     4.24  0.38  0.22  0.88    424  52.2
   770916  1140148   172  455  335  229  100  0.605  0.33     4.24  0.33  0.15  0.70    488  56.9
   770916  1135149   181  503  369  232  135  0.603  0.39     4.26  0.36  0.19  0.81    476  58.8
   770916  1040150   183  513  378  232  114  0.579  0.38     3.97  0.37  0.19  0.66    488  54.9
   770916  1030151   172  517  379  230  106  0.588  0.32     3.98  0.37  0.13  0.72    468  56.6
   770916  1020152   175  556  407  230   94  0.588  0.32     3.72  0.34  0.13  0.82    468  54.2
   770916  1015153   176  539  395  224   65  0.735  0.32     3.12  0.34  0.13  0.67    468  60.1
   770916  1010154   176  539  395  235  110  0.805  0.33     3.73  0.33  0.15  0.70    468  57.9
C  770916  0950155   189  589  429  247  112  0.905  0.35     3.90  0.30  0.18  0.57    468  56.6
   770916  0940156   186  575  421  241  105  0.656  0.33     3.60  0.32  0.19  0.51    520  57.6
   770916  0930157   136  427  314  167  500  0.803  0.42     2.48  0.32  0.57  0.18    492  44.7
   770916  0935220   197  599  438  247  105  0.630  0.45     3.69  0.30  0.25  0.45    628  57.9
77OCT04    33
   771004  1525124       1051  765  263  122  0.21   0.05     1.65  0.19  0.27          102
   771004  1520125        860  626  263   91  0.19   0.05     1.96  0.18  0.21          101
   771004  1515126        829  604  303  136  0.18   0.06     1.98  0.16  0.12           80
   771004  1505127        829  604  307  118  0.26   0.10     1.03  0.19  0.78           71
   771004  1500128        879  640  287   99  0.14   0.06     8.25  0.16  0.03           86
   771004  1455129        838  610  293  138  0.20   0.08     3.57  0.18  0.45           86
   771004  1450130        758  553  277  112  0.27   0.12     3.35  0.32  0.45           68
   771004  1445131        742  541  267  122  0.28   0.11     3.87  0.34  0.43           70
   771004  1440132        754  550  267   94  0.20   0.06     2.56  0.50  0.21           69
   771004  1435133        731  533  257   89  0.16   0.04     2.46  0.29  0.27           75
   771004  1430134        742  541  277   86  0.17   0.05     2.45  0.30  0.18           61
   771004  1355137        736  537  280   94  0.16   0.06     2.54  0.37  0.30           75

   771004  1350138        750  547  287   96  0.16   0.06     2.37  0.54  0.33           72
   771004  1345139        755  551  273   92  0.14   0.05     2.22  0.38  0.45           83
C  771004  1340140        742  541  290  103  0.18   0.07     2.23  0.37  0.42           67
   771004  1330141        746  544  270   81  0.16   0.06     2.15  0.37  0.47           78
   771004  1325142        759  553  280   82  0.16   0.03     1.92  0.30  0.36           79
   771004  1320143        760  554  297   80  0.14   0.06     2.01  0.29  0.30           61
   771004  1210144        772  563  300  106  0.15   0.06     2.06  0.24  0.50           69
   771004  1200145        746  544  287   73  0.14   0.05     2.00  0.22  0.18           56
   771004  1155146        670  489  267  102  0.15   0.03     1.72  0.19  0.18           73
   771004  1150147        772  563  297   88  0.14   0.06     2.53  0.22  0.27           54
   771004  1145148        744  543  290   86  0.14   0.05     2.38  0.22  0.28           60
   771004  1140149        702  512  263   68  0.14   0.07     2.38  0.22  0.27           59
   771004  1030150        744  543  287   98  0.16   0.06     2.26  0.26  0.30           61
   771004  1020151        707  516  267   93  0.15   0.06     2.26  0.26  0.30           86
   771004  1010152        742  541  283   86  0.17   0.06     2.11  0.26  0.27           67
   771004  1005153        720  525  287  104  0.15   0.05     2.11  0.26  0.27           70
   771004  1000154        746  544  290   81  0.15   0.06     2.04  0.26  0.42           60
C  771004  0945155        761  555  305  118  0.13   0.07     1.88  0.26  0.39           69
   771004  0935156        695  507  270   79  0.13   0.06     1.88  0.26  0.45           68
   771004  0925157        613  443  247   93  0.35   0.11     1.01  0.06  0.18           69
   771004  0930220        688  502  278   95  0.20   0.06     2.30  0.22  0.45           83
77OCT13     5
   771013  15051          932  678  352  326  0.34   0.05     4.80  0.10  0.18          208
   771013  15104          634  463  288  132  0.13   0.01     4.18  0.03  0.03          127
   771013  15205         1211  879  323  108  0.36   0.19     7.59  0.37  0.81           83
   771013  144514         629  460  253   98  0.44   0.13     1.64  0.05  0.24          101
   771013  152516        20321468  364   72  1.58   1.34     2.83  0.54  2.30           36
77SEP19    24
   771019  1540191        957  696  360  308  0.23   0.03     0.11  0.09  0.51          132
   771019  1535192        840  612  274  136  0.07   0.03     0.02  0.03  0.03           97
   771019  1525193        840  612  324  107  0.25   0.10     0.01  0.06  1.56           91
   771019  1515194        763  556  330  134  0.07   0.02     0.13  0.02  0.03           96
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  771019 1500195       645  471  290  121  0.04   0.01    0.89  0.03  0.01          95
  771019 1430196       643  470  280  129  0.04   0.02    0.74  0.03  0.01          95
  771019 1420197       645  471  273  126  0.03   0.01    1.04  0.03  0.01         108
  771019 1415198       712  520  310  141  0.05   0.02    0.88  0.04  0.03          79
  771019 1405199       694  507  310  149  0.06   0.02    1.04  0.03  0.02          79
  771019 1355200       655  479  297  186  0.11   0.04    1.58  0.10  0.24          82
  771019 1350201       618  452  288  167  0.11   0.03    1.44  0.09  0.18          84
  771019 1315203       669  489  297  114  0.18   0.04    1.50  0.11  0.03          68
  771019 1310204       641  469  283  131  0.18   0.03    1.57  0.11  0.03          89
  771019 1305205       683  499  308  136  0.18   0.04    1.65  0.11  0.15          77
  771019 1300206       643  470  280  145  0.18   0.03    1.55  0.13  0.01          94
  771019 1255207       670  489  293  134  0.18   0.04    1.63  0.13  0.07          79
  771019 1245208       658  481  293  146  0.17   0.03    1.71  0.13  0.03          82
  771019 1240209       658  481  290  166  0.18   0.04    1.55  0.13  0.09          88
  771019 1235210       684  499  307  162  0.09   0.04    1.57  0.11  0.03          77
C 771019 1230211       680  497  300  158  0.07   0.03    1.58  0.10  0.01          82
  771019 1200212       734  535  320  164  0.07   0.03    1.54  0.07  0.01          73
C 771019 1455215       713  520  297  104  0.04   0.01    1.48  0.05  0.01          62
C 771019 1445221       713  520  290  175  0.04   0.01    1.48  0.05  0.01          97
  771019 1400274       708  517  307  119  0.18   0.06    1.36  0.08  0.36          75
77OCT20  13
  771020 133014        716  523  270  116  0.35   0.12    0.86  0.06  0.18          73
  771020 1535104       770  561  292  118  0.34   0.13    5.90  0.14  0.39          62
  771020 1525113       847  617  297  139  0.21   0.08    2.98  0.08  0.06          70
  771020 1520114       893  650  280  235  0.26   0.08    2.78  0.13  0.18          75
  771020 1515115       896  652  310  164  0.41   0.18    2.13  0.32  1.83          63
  771020 1510116      1226  889  324   91  1.31   1.07    3.95  1.56  2.55          24
  771020 1455117      1340  971  346  203  1.08   0.77    0.25  0.59  1.30          71
  771020 1445118      1243  903  324  164  0.64   0.33    0.39  0.38  2.13          75
  771020 1420119      1149  835  320  158  0.27   0.10    1.00  0.22  0.78         102
  771020 1415120      1113  809  333  164  0.27   0.08    1.19  0.19  0.57          89
  771020 1410121      1086  789  320  191  0.22   0.07    1.35  0.18  0.48          99
  771020 1405122      1077  783  320  200  0.26   0.07    1.35  0.18  0.39         120
  771020 1400123      1101. 801  333  218  0.26   0.06    1.24  0.14  0.48         118
77OCT21  20
  771021 1550171       571  418  260  118  0.06   0.01    0.10  0.05  0.06          85
  771021 1545172       576  422  267   84  0.05   0.01    0.44  0.02  0.03          54
  771021 1540173       692  505  300  132  0.06   0.02    0.44  0.02  0.03          78
  771021 1535174       662  484  280  129  0.04   0.01    0.29  0.02  0.01          79
  771021 1500175       597  437  280  112  0.04   0.02    0.29  0.02  0.02          70
  771021 1450176       657  480  257   93  0.04   0.02    0.13  0.02  0.01          58
  771021 1445177       669  489  290   81  0.04   0.01    0.13  0.02  0.01          49
  771021 1440178       662  484  283   88  0.04   0.01    0.13  0.02  0.01          49
  771021 1435179       665  486  280  102  0.06   0.01    0.21  0.02  0.01          62
  771021 1430180       659  481  277  122  0.06   0.01    0.21  0.02  0.03          76
  771021 1425181       671  490  287  106  0.06   0.02    0.20  0.03  0.03          61
  771021 1420182       650  475  283  143  0.07   0.02    1.35  0.03  0.05          83
  771021 1415183       618  452  270  144  0.06   0.01    1.04  0.03  0.03          71
  771021 1410184       595  435  263  141  0.05   0.01    0.89  0.03  0.03          66
  771021 1405185       607  444  273  168  0.06   0.01    0.87  0.03  0.07          87
  771021 1400186       630  461  280  175  0.04   0.01    0.74  0.03  0.06          75
  771021 1340187       669  489  266  153  0.06   0.02    0.69  0.08  0.03          81
  771021 1335188       655  479  263  141  0.05   0.02    0.71  0.06  0.03          70
  771021 1330189       768  560  297  143  0.06   0.02    1.17  0.05  0.06          70
C 771021 1320190       730  533  277  126  0.12   0.03    0.82  0.10  0.01          56
77OCT29   1
  771029 130014        653  477  257  159  0.28   0.07    0.82  0.08  0.12          78
77NOV04   1
  771104 141514        776  566  290  121  0.34   0.14    0.99  0.08  0.17          47
```

RAINULATOR DATA

Data from experiments utilizing the rainfall simulator are included in the following section.

Data tapes of rainulator results are available from:

Agricultural Engineering Department
Purdue University
West Lafayette, IN 47907

Tapes will be supplied at the cost of reproduction.

Treatment mean values for total soil loss (grams).[1]

Run	Soil	Disk	Fall plow	Chisel	No till	Spring plow
Initial	Hoytville	13.48	15.17	27.47	21.77	-
	Nappanee	33.58	33.39	27.28	29.07	-
	Haskins	30.28	38.80	-	14.81	32.93
Wet	Hoytville	11.36	15.16	18.30	13.40	-
	Nappanee	27.64	29.21	27.50	24.05	-
	Haskins	24.24	37.89	-	10.11	21.01
Very wet	Hoytville	10.48	11.33	19.36	12.76	-
	Nappanee	18.60	24.54	34.72	23.35	-
	Haskins	31.25	28.91	-	9.04	21.06

---

[1] Based on four samples/treatment/run.

Weighted mean values for percentage of soil loss in aggregate form.

		Treatments[1]						
Run	Soil	Disk	Fall plow	Chisel	No till	Spring plow	All[2]	Similar[3]
Initial	Hoytville	11.18	17.74	22.48	20.20	-	18.96	17.05
	Nappanee	13.46	21.22	9.91	12.51	-	14.55	15.87
	Haskins	6.17	17.29	-	1.75	16.73	12.28	10.53
Wet	Hoytville	12.98	17.03	14.09	7.41	-	13.10	12.65
	Nappanee	13.14	12.91	15.66	10.74	-	13.18	12.34
	Haskins	8.91	16.19	-	4.16	1.78	9.75	12.06
Very wet	Hoytville	13.84	17.01	18.30	17.83	-	17.05	16.35
	Nappanee	10.61	12.28	17.60	14.28	-	14.26	12.52
	Haskins	10.56	11.33	-	5.58	2.06	8.32	10.23

---

[1] Formula used was $\sum_{i=1}^{4}$ (sample soil loss wt. x percent aggregates) $\div$ ($\sum_{i=1}^{4}$ sample soil loss wt.).

[2] Formula used was similar to above only mean weights and weighted mean percentages were used for all treatments.

[3] Formula used was same as (2) except only treatments of disk, fall plow, and no till were used.

Run effect on individual treatments within each soil showing when the highest value for percentage of soil loss in aggregate form occurred.

	Treatments					
Soil	Run	Disk	Fall plow	Chisel	No till	Spring plow
Hoytville	Dry	3	1	1	1	
	Wet	2	2	3	3	
	Very wet	1	3	2	2	
Nappanee	Dry	1	1	3	2	
	Wet	2	2	2	3	
	Very wet	3	3	1	1	
Haskins	Dry	1	1		3	1
	Wet	2	2		2	3
	Very wet	3	3		1	2

Legend: 1 - Highest value
2 - Second highest value
3 - Lowest value

Soil loss (T/A) by treatment.[1]

Run	Soil	Disk	Fall Plow	Chisel	No till	Spring plow
Initial	Hoytville	1.77	1.20	2.36	1.86	-
	Nappance	3.20	3.12	3.56	2.32	-
	Haskins	4.42	4.26	-	1.08	1.23
Wet	Hoytville	0.58	0.54	1.22	0.74	-
	Nappanee	1.21	1.60	1.69	1.34	-
	Haskins	1.78	1.87	-	0.77	0.98
Very wet	Hoytville	0.71	0.61	0.58	0.86	-
	Nappanee	1.22	1.60	1.82	1.41	-
	Haskins	1.54	1.72	-	0.78	1.20

---

[1] Figures supplied by C. B. Johnson, Engineering Technician, ARS-USDA, Lafayette, Indiana.

Mean values for total soil loss (grams) per sample[1] and soil loss (T/A)[2] for similar treatments.[3]

Soil	Run					
	Initial		Wet		Very wet	
	Sample	Soil loss	Sample	Soil loss	Sample	Soil loss
Hoytville	16.80	1.61	13.31	0.62	11.52	0.73
Nappanee	32.01	2.88	26.96	1.38	22.16	1.41
Haskins	27.96	3.42	24.08	1.47	23.07	1.34

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[1] Based on 12 samples/soil/run.

[2] Supplied by C. B. Johnson, Engineering Technician, ARS-USDA, Lafayette, Indiana.

[3] For treatments of disk, fall plow, and no till only.

Mean values for total soil loss (grams) per sample[1] and soil loss (T/A)[2] over all treatments.

	Run					
	Initial		Wet		Very wet	
Soil	Sample	Soil loss	Sample	Soil loss	Sample	Soil loss
Hoytville	19.47	1.80	14.55	0.77	13.48	0.69
Nappanee	30.83	3.05	28.90	1.46	25.30	1.51
Haskins	29.21	2.75	23.31	1.35	22.57	1.31

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[1] Based on 16 samples/soil/run.
[2] Supplied by C. B. Johnson, Engineering Technician, ARS-USDA, Lafayette, Indiana.

Correlation coefficients (r)[1] between total soil loss per sample and percentage of soil loss in aggregate form.

		Treatments					
		All			Similar[2]		
Run	Soil(s)	r	β_1	β_0[3]	r	β_1	β_0
Dry	Hoytville	0.741	0.822	0	0.794	0.933	0
	Nappanee	0.728	0.418	0	0.720	0.434	0
	Haskins	0.732	0.349	0	0.703	0.315	0
Wet	Hoytville	0.584	0.816	0	0.539	0.894	0
	Nappanee	0.804	0.418	0	0.659	0.438	0
	Haskins	0.812	0.344	0	0.956	0.398	0
Very wet	Hoytville	0.538	1.136[4]	0	0.625	1.350[4]	0
	Nappanee	0.798	0.468	0	0.639	0.525	0
	Haskins	0.524	0.284	0	0.797	0.185	4.377
Dry	All	0.547	0.462	0	0.440	0.451	0
Wet	All	0.509	0.443	0	0.497	0.302	4.430
Very wet	All	0.294	0.202	7.300	0.165	0.106	9.745

[1] Formula is % aggregated = $\beta_0 + \beta_1$ (total soil loss per sample).

[2] Based on treatments of disk, fall plow, and no till only.

[3] $\beta_0 = 0$ when it is not significant, correlation coefficient and β_1 are for the line forced thru the origin.

[4] Can only be explained by the fact that the samples used were not indicative of the population of samples that could have been taken.

Runoff[1] by treatment for each run in inches.

Run	Soil	Disk	Fall plow	Chisel	No till	Spring plow
Initial[2]	Hoytville	2.04	1.32	1.64	1.50	-
	Nappanee	1.82	1.57	1.54	1.41	-
	Haskins	1.96	1.82	-	1.74	0.48
Wet[3]	Hoytville	0.86	0.56	0.88	0.81	-
	Nappanee	0.94	0.90	0.90	0.92	-
	Haskins	1.02	0.98	-	0.99	0.72
Very wet[3]	Hoytville	0.98	1.00	0.68	0.85	-
	Nappanee	0.90	1.04	0.92	0.96	-
	Haskins	0.99	0.90	-	1.06	0.87

---

[1] Figures supplied by C. B. Johnson, Engineering Technician, ARS-USDA, Lafayette, Indiana.

[2] Application of 2.5 inches in 60 minutes.

[3] Application of 1.25 inches in 30 minutes.

Mean weight diameters (mm).[1]

	Oscillated (min.)			Not Oscillated (min.)		
Soil	10	15	20	10	15	20
Hoytville	0.91	0.89	0.87	2.63	2.34	2.02
Nappanee	0.43	0.40	0.37	1.44	1.29	1.12
Haskins	0.58	0.58	0.54	1.62	1.53	1.35

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[1] Based on 8 samples, 2 samples per treatment (from bulk samples).

Summary of ANOVA'S.

Source	d.f.	M.S.	Level of Significance
A. Dry Run - All soils: Total sediment lost/sample			
Soils	2	744.6081	1%
Soils x Treatments	4	268.5373	10%
Error	18	110.4299	
B. Wet Run			
1. Haskins sil: Total sediment lost/sample			
Treatments	3	524.0621	1%
Error	8	19.6113	
2. Haskins sil: Sediment lost as aggregates (%)			
Treatments	3	143.7899	1%
Error	8	8.8350	
3. All Soils: Total sediment lost/sample			
Soils	2	621.8760	1%
Treatments	2	402.8828	1%
Soils x Treatments	4	205.7913	1%
Error	18	28.9078	
C. Very Wet Run			
1. Hoytville sicl: Total sediment lost/sample			
Treatments	3	65.0321	5%
Error	8	12.9345	
2. Haskins sil: Sediment lost as aggregates (%)			
Treatments	3	69.3858	1%
Error	8	5.0641	
3. All Soils: Total sediment lost/sample			
Soils	2	494.8532	5%
Soils x Treatments	4	249.7713	10%
Error	18	88.0525	

Nutrient Concentrations in Animal Wastes

Type Waste	Solids	Amm.-N	Nit.-N	Org. N	Total P
	%	ppm (wet basis)			
Liquid swine	8.1	3165	27	2580	1370
Solid swine	39.0	5750	82	10190	7000
Solid cattle	23.4	1288	38	3535	690

Amounts of Nutrients Added in Waste Applications to Three Experimental Sites

Experiment No.	Type Waste Applied	Rate Waste Applied t/ha	Nutrients Applied Amm.-N	Nit.-N	Org. N	Total P
			kg/ha			
1	Swine (liquid)	95.6	303	3	246	131
	Swine (solid)	90.0	524	8	970	730
	Swine (solid)	238	1350	18	2244	1396
2	Swine (solid)	90.0	524	8	970	730
3	Cattle (solid)	90.0	116	3	318	62
	Cattle (solid)	180.0	332	6	636	124

Losses of Sediment and Nutrient in Runoff From Overgrazed Pasture

Cattle Waste Applied t/ha	Rain-storm	H2O Runoff cm	Sed-iment	Amm.-N	Nit.-N	SON	Sed N	SIP	SOP	Sed P
			kg/ha							
0	1	2.07	24	0.04	0.03	0.26	0.44	0.073	0.013	0.073
	2	2.29	21	0.10	0.04	0.39	0.66	0.010	0.007	0.080
	Total	4.36	45	0.14	0.07	0.65	1.10	0.083	0.020	0.153
90	1	1.61	63	1.34	0.07	2.17	3.96	1.122	0.061	0.232
	2	1.99	47	1.05	0.11	1.48	4.51	0.793	0.047	0.488
	Total	3.60	110	2.39	0.18	3.65	8.47	1.915	0.108	0.720
180	1	0.93	61	1.23	0.07	2.31	2.48	0.920	0.132	0.176
	2	2.98	103	2.54	0.11	4.32	11.50	2.232	0.108	1.327
	Total	3.91	164	3.77	0.18	6.63	13.98	3.152	0.340	1.503

Concentrations of Solids and Nutrients From an Overgrazed Pasture

Cattle Waste Applied	Rain-storm	Concentration in Runoff Solids	Amm.-N	Nit.-N	SON	SIP	SOP	Concentration in Sediment N	P
		mg/l						mg/kg	
0	1	116	0.19	0.15	1.26	0.353	0.063	18330	3040
	2	92	0.44	0.18	1.70	0.044	0.031	31430	3810
	Ave.	103	0.32	0.16	1.49	0.190	0.046	24440	3400
90	1	391	8.32	0.44	13.48	6.969	0.379	62860	3680
	2	236	5.28	0.55	7.44	3.985	0.236	95960	10380
	Ave.	306	6.64	0.50	10.14	5.319	0.300	77000	6545
180	1	656	13.22	0.75	24.84	9.892	1.419	40660	2885
	2	346	8.52	0.37	14.50	7.490	0.362	111650	12880
	Ave.	419	9.64	0.46	16.96	8.061	0.870	85240	9165

Proportions of Added Nutrients Lost in Surface Runoff From an Overgrazed Pasture

Cattle Waste Added t/ha	Nutrients in Cattle Waste Lost Amm.-N	Nit.-N	Org N	Total P
	% of added lost in runoff*			
90	1.9	3.7	3.3	4.0
180	1.1	1.8	3.0	3.8

* Calculated as:

$$\frac{(\text{Nutrient from treated peat : nutrient from control plot}) \times 100}{\text{Nutrient added in waste}}$$

SUMMARY SHEETS - BLACK CREEK FISH STUDIES

James R. Karr

The following pages provide a brief summary of fish studies in Black Creek. Because of the volume of raw data involved, a telegraphic form of presentation has been adopted here. We have repeatedly used abbreviations, scientific names, and other shortened forms to include the greatest amount of information in limited space. More detailed information is available in 10 volumes of field and laboratory notebooks.

Early in the project we developed two or three letter codes based on the scientific name of each fish species. Those codes and the species they identify are listed below in alphabetical order.

When both species composition and relative abundances are known for a sample, an index of species diversity if calculated using the information theoretic measure used commonly in ecological studies. Species diversity = Σp_i ln pi where p_i is the proportion of the sample represented by species i, and ln indicates the use of log base e (natural logarithms).

Code	Scientific Name	Common Name
Ca	Campostoma anomalum	Stoneroller
Cc	Catastomus commersoni	White Sucker
Ccp	Cyprinus carpio	Carp
Ccr	Carpiodes cyprinus	Quillback Campsucker
Dc	Dorosoma cepidianum	Gizzard Shad
Eb	Ericymba buccata	Silverjaw Minnow
Ec	Etheostoma caerulum	Rainbow Darter
El	Esox lucius	Northern Pike
En	Etheostoma nigrum	Johnny Darter
Eo	Erimyzon oblongus	Creek Chubsucker
Esp	Etheostoma spectabile	Orange-throated Darter
Fn	Fundulus notatus	Blackstripe Topminnow
Im	Ictalurus melas	Black Bullhead
In	Ictalurus nebulosus	Yellow Bullhead
Lc	Lepomis cyanellus	Green Sunfish
Lm	Lepomis macrochirus	Bluegill
Lmc	Lepomis microlophus	Redear Sunfish
Ls	Labidesthes sicculus	Brook Silverside
Ms	Micropterus salmoides	Largemouth Bass
Nc	Notropis cornutus	Common Shiner
Ncr	Notemigonus crysoleucas	Golden Shiner
Ns(p)	Notropis spilopterus	Spotfin Shiner
Nst	Notropis stramineus	Sand Shiner
Nu	Notropis umbratilis	Redfin Shiner
Pa	Percina maculata	Black-sided Darter
Pm	Phenacobins mirabilis	Suckermouth Minnow
Pn	Pimephales notatus	Bluntnose Minnow
Pp	Pimephales promelas	Fathead Minnow
Sa	Semotilus atromaculatus	Creek Chub

BLACK CREEK FISH SUMMARY SHEET

Station 2
Smith-Fry Drain above Notestine Road

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
24-25 July 1973	37	161.0	4.35	7	1.667
12-13 April 1974	55	397.8	7.23	8	1.691
Comments: Done in 25 m sweeps.					
20-21 May 1974	59	-	-	6	1.256
23 July 1974					
Comments: Very low flow, some pools, water rather foul, bluegreen algae, some fry (Sa, Cc, En) Bottom oozy-silty.					
18 October 1974					
Comments: Small flow, small pools, some small fish present.					
5 December 1974:					
Comments: Ice, snow, running clear under bridge, 11 ppm O_2, 0°C.					
7-8 February 1975					
Comments: Small fry.					
22-23 March 1975	8			1	0
Comments: Seined two times. Bottom: silt, rock, gravel, clay. 8 S.A. caught.					
5 April 1975					
Comments: Seined twice, flowing clear, rock and silt bottom.					
19 April 1975	43			4	.525
Comments: Seined three times. Bottom: silty, gravel, rocks. Water: clear.					
3 May 1975	31			4	.687
Comments: Four 25m seines. Bottom: sandy & gravel.					
29 May 1975	1			1	
Comments: 1 meter wide: Mean depth 7". Many dead fish, all species. Bottom: rocky, hard.					
17 June, 1975	41			7	1.646
Comments: Bottom: rocky, clay. Depth: 30-70 cm. Width: 1-1/2 m. Water: turbid.					
25, June 1975	27			8	1.798
Comments: Swift current. Depth: 30-80. $\overline{50}$ (changed very much). Width: 2 meters. Bottom: rocky-clay(hard)					
10 July 1975	47			5	8.930
Comments: Made numerous stops while seining due to heavy algae growth. Very many catfish sighted. Water: clear 23.5°C. Depth: 10 in. Width: 1-- 1-1/2 m.					

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
24 July 1975	14			6	1.668
Comments:	Width: 1/2 - 1-1/2 m. Depth: 16" (at deepest point) Bottom: clay. Much algae, but less than previous trip. Numerous fish escaped under seine due to algae buildup on the bottom of the seines. Many crayfish sighted and caught.				
12 August 1975	1			1	
Comments:	Depth: 1 - 12". Width: 1/8 - 1 meter. Bottom: clay. Water: much scum floating on top, some algae.				
26 August 1975	4			3	1.040
Comments:	Depth: 2 - 18". Width: 1/2 - 1 meter. Bottom: clay with rock. Water: turbid.				
19 September 1975	10			2	.500
Comments:	Quite low (more than normal). Water: clear, algae buildup extensive (seined 40 lbs.).				
10 October 1975	0				
Comments:	No fish sighted or caught, heavy algae growth. Water: clear. Bottom: clay & rock. Depth: 10" - 12". Width: 1 meter.				
15 November 1975	0				
Comments:	Water temp. - 2.5°C. Water: cloudy. No ice. Lots of decaying algae. No fish sighted.				
13 December 1975	0				
Comments:	No fish seen. Water: cloudy. Depth: 12" - 18". Bottom: clay. Lots of Isopods, Gerridae, Lorixidae, Notonectidae.				
23 January 1976					
Comments:	Frozen - snow covered.				
26 March 1976					
Comments:	H' biomass. Water: turbid. Banks are slipping. Bottom: clay, silt gravel. Few fish.				
22 April 1976	41			2	
Comments:	No fish sighted until reaching pool above block seine. Much cladophora 4 crayfish. 1 seine haul.				
24 May 1976	1			1	
Comments:	Much cladophora. Mid channel partly open. Only one small PN sighted & captured. Dip netted. Stream nearly choked with algae.				
24 June 1975					
Comments:	Tons of cladophora Only a few fry seen - not sampled.				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
21 June 1976	19			4	

Comments: Nine of the 19 fish were fry, several SA were sighted in pool just below sample area (size 100 mm). Water: fairly clear - algae on surface is gone, but the bottom is matted with decaying algae. Depth: 2" - 15".

BLACK CREEK FISH SUMMARY SHEET

Station 3
Wertz Drain above Notestine Road

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
24-25 July 1973	128	539	4.21	13	2.124
12-13 April 1974	40	69.5	1.74	6	1.299
19-20 June 1974	109	224.6	2.07	7	1.103
Comments:	3 fry (1 white sucker, 2 bluntnose minnows) not included).				
23 July 1974				5	
Comments:	Dip net sample. Many fish fry, especially silverjaw. Also Sa, Ca, En, 1 adult LC. Mud & Sandy bottom, choked with blue green algae. Water: clear.				
September 1974	0				
18-19 October 1974					
Comments:	Slight flow. Darkly polluted water. Crustations of algae. No sample taken.				
7 December 1974					
Comments:	10 ppm O_2. 25°C under bridge.				
8 February 1975					
Comments:	Large numbers of Ca & Sa all sizes, mostly below bridge. Ice thick & clear.				
22-23 March 1975	64	175.9	2.75	6	.887
Comments:	Seined twice. Water: flowing clear. Bottom: silty, rock.				
5 April 1975	1			1	
Comments:	Bottom: silt. Water: clear. Width: 2 - 3 m. Depth: 5". Strong sewage smell. Seined once.				
19 April 1975	20	32.7	1.64	5	1.094
Comments:	Seined once. Bottom: muddy-sand. Crayfish caught. Depth: 1'. Width: 2-3 m.				
29 May 1975	139			12	
Comments:	Sewage odors offensive.				
17 June 1975	138			10	1.776
Comments:	Water: murky. Bottom: muck. Depth: up to 70 cm on the side.				
25 June 1975	33			9	1.958
Comments:	Depth: 20 - 50 cm. Width: 2 - 3 m. Bottom: sand. Water: turbid. Aquatic vegetation moving into area. 7 crayfish.				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
10 July 1975	91			9	2.054
Comments:	Many topminnow (more than 12) were sighted - none caught. Depth: 24". Width: 2 - 3 m. Water: clear with algae flowing through. Algae growth on bottom. Lots of aquatic vegetation. Water temp.: 24.0°C.				
24 July 1975	101			12	1.947
Comments:	Depth: 24" (max). Width: 3 m. Bottom: sand & muck. By drain pipe, purple water was sighted. Very scummy. Algal bloom reduced from last trip, but still very pronounced. Water: turbid. Black muck stirred up from lower end of section.				
12 August 1975	120			11	1.719
Comments:	Width: 1-1/2 - 4 meters. Depth: 4 - 16". Bottom: sandy gravel covered with muck. Water: purple at drain from house on the west side. Muck & scum floating on top. Area smells from waste being dumped in. Water temp.: 27.8°C.				
26 August 1975	187			14	2.014
Comments:	Depth: 12" - 18" (by drain 30"). Width: 2 - 2-1/2 m. Bottom is black organic muck. Water: turbid. Lots of aquatic vegetation. 2 subspecies of common shiner.				
19 September 1975	297			13	1.690
Comments:	While seining, thousands of fry sighted, but not caught. Water: slightly clouded. Blue area around sewage outflow. After seining residual detergent foam was coming out of the sewage outflow. Depth: 6" - 2'. Width: 1 - 2 meters. Bottom: mucky with algae.				
10 October 1975					
Comments:	Fish samples taken back. Bottom: muck. Water: turbid. Depth: 2" - 2'. Width: 1 - 2-1/2 m. Small rock dam at bottom of bridge.				
15 November 1975					
Comments:	Water temp.: 1.2 - 1.5°C. 1/4" thick ice covering entire upper 50 m sample area. Only small open spots elsewhere. Bright green algae growing under ice. Water: cloudy. Black organic matter. Bottom: muck.				
13 December 1975					
Comments:	Schools of PP sighted. Larger fish sighted also. Dip netted. Depth: up to 12". Bottom: much more gravel. Cladophora growing on top. Soap suds on top. Bottom: black organic matter. Water: somewhat clear.				
23 January 1976					
Comments:	Frozen - snow covered.				
11 March 1976	100+			2	
Comments:	Water temp: 4°C. 1 seine haul. Water: slightly turbid. Depth: 1'. Width: 2 m. Bottom: sand & silt. No fish sighted before seining.				

Date	Number of Individuals	Total Weight	Weight of Individual	Number of Species	Species Diversity
8-9 April 1976	258			9	1.382
Comments:	Bottom: muck. Depth: 8" - 18". Width: 1 - 2-1/2 m. Water: clear. 2 seine hauls. Much plant debris in bottom of stream.				
14 May 1976					
Comments:	Water temp.: 18°C. Bottom: muck. Water: clear. Width: 1-1/2 - 3 m. Depth: 6" - 18". 2 water snakes & 1 garter snake. Blue plume of water discharging from drain pipe from house.				
9 June 1976	31			6	
Comments:	Heavily choked with algae. Dip netted. 7 species of grass in bloom.				
8 July 1976	132			13	
Comments:	2 seine hauls total, but each done in short stretches due to algae. Many of the LC's were large. Black muck at bottom of drain tile. Bottom: mucky-muddy. Depth: 8" - 20". Water: very turbid.				
3 August 1976	99			9	
Comments:	Water: very turbid. Lots of decaying organic matter. One snapping turtle & 1 small muskrat caught. Depth: 8" - 12". Very smelly - especially at drain tile. Net type of algae present.				

BLACK CREEK FISH SUMMARY SHEET

Station 4
Upper Gorrell Drain above Notestine Road

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
24-25 July 1973	185	84	.45	4	.806
12-13 April 1974	18	91.1	5.06	5	.974
23 July 1974					
Comments:	Fish fry (Sa, Eb, Pn) in pool under bridge. Water: clear. Bottom: silty.				
18-19 October 1974					
Comments:	No net flow north of bridge. Relatively clear pool. Found a muskrat hole. Pool of sewage effluent south of bridge.				
7 December 1974					
Comments:	Iced over, snow drifts.				
8 February 1975	7	78.9	11.2	7	.598
Comments:	Intensive dip net sample. Non-quantitative. Water: clear. Medium - large Sa & Ca.				
22-23 March 1975	10	27.9	2.79	3	.898
Comments:	Collected with dip nets. Bottom: sand-silt. Depth: 2 - 10".				
5 April 1975					
Comments:	Bottom: sand-gravel. Width: 1/2 - 2 m. Depth: 1 - 10". Below bridge (Wier) pool of Eb, Nsp & En.				
19 April 1975					
Comments:	Upstream, sand-silt bottom with some gravel. Downstream - water clear, shallow, until below bridge (clay, hard pan bottom). Sa & Eb (a lot) downstream. 7 - 8 Ec caught. 2 crayfish.				
29 May 1975	105			11	2.045
Comments:	Flowing clear. Bottom: gravel.				
17 June 1975	46			9	1.952
Comments:	Water: clear. Bottom: sand-gravel. Depth: 5 - 20. Width: 1 - 1-1/2 m.				
25 June 1975	43			7	1.833
Comments:	Depth: 30. Width: 2-1/2 m (constant). Bottom: sand-gravel Water: turbid.				
10 July 1975	83			10	1.738
Comments:	Many small fish caught in algae that would normally have been able to swim through net. Many fatalities due to heat & heavy algae. Gravel bars present - very much algae, some aquatic plants. Depth: 2 - 10 Width: 1/2 - 3 m. Bottom: sand-gravel. Small Eb's ≈ 30 Carpsuckers all very small. Water tem p: 24.5°C.				

<table>
<tr><th>Date</th><th>Number of Individuals</th><th>Total Weight</th><th>Weight per Individual</th><th>Number of Species</th><th>Species Diversity</th></tr>
<tr><td>24 July 1975</td><td>171</td><td></td><td></td><td>11</td><td>1.871</td></tr>
<tr><td>Comments:</td><td colspan="5">Depth: 1 - 12". Width: 1/4 - 2-1/2 m. Bottom: sand. Water: clear, much algae growth. Water Temp.: ≈ 30.0°C Tadpole with legs caught.</td></tr>
<tr><td>12 August 1975</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">Not seined due to fry and heavy algae growth. Width: 1/8 to 2-1/2 m. Depth: 1/2" - 6". Bottom: sand & gravel. Water: clear. Numerous large schools of fry, some larger fish sighted.</td></tr>
<tr><td>26 August 1975</td><td></td><td></td><td></td><td>8</td><td>1.815</td></tr>
<tr><td>Comments:</td><td colspan="5">Width: 1 - 1-1/2 m. Depth: 1" - 16". Bottom: sand, gravel, silt. Water temp. 30.0°C (at 1505 hrs). Much algae present responsible for catching fry) water cloudy but not turbid (can see bottom, but not clearly). 6 tadpoles caught.</td></tr>
<tr><td>19 September 1975</td><td>129</td><td></td><td></td><td>5</td><td>1.333</td></tr>
<tr><td>Comments:</td><td colspan="5">Bottom: clean, gravelly to sandy, some algae. Depth: 2" - 8". Clarity excellent. Width: 1 - 2 m. 1000's of fry seen but not captured (< 25 mm) most of the fish were small (25 - 35 mm) (suspect fry are Eb & PP).</td></tr>
<tr><td>10 October 1975</td><td></td><td></td><td></td><td>6</td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">All species are fry - thousands in number. Numerous small frogs. Acris gryllus (cricket frog). Water: clear. Bottom: sand & gravel & algae. Depth: 2" - 6". Width: 1-1/2 m. Sa, Eb, PN, PP, NU, NSP.</td></tr>
<tr><td>15 November 1975</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">Ice (in some places covers entire stream) up to 1/4" thick. Water: cloudy. Water temp. 1.0 - 1.5°C. Decaying cladophora on bottom. Small disoriented Eb's - too small to bring back for analysis (2 dead minnows also - could be Sa & Pp also, due to large masses of decaying algae)</td></tr>
<tr><td>13 December 1975</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">Eb, PN, PP Large schools sighted. Size range 25 - 35 mm. Water: clear. Bottom: sandy. Depth: 6". Width: 1 - 1 - 1/2m. dip netted.</td></tr>
<tr><td>23 January 1976</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">Frozen. Snow covered.</td></tr>
</table>

BLACK CREEK FISH SUMMARY SHEET

Station 5
Richelderfer Drain above Notestine Road

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
24-25 July 1973	35	87	2.49	4	.716
12-13 April 1974	8	44.8	5.6	4	1.213
20-21 May 1974	3	5.1	1.7	3	1.099
Comments:	Non quantitative sample. Rip Rap at Bend 200 meters south of station. 5 under bridge. Around 300 small fish (only 3 preserved were rainbow darter, fathead minnow. topminnow). Other fish included creek chub, silverjaw, minnow.				
23 July 1974				2	
Comments:	Choked with algae. Bottom: sandy, silty. Silverjaw and creek chub fry.				
18-19 October 1974					
Comments:	Small net flow. Running clear. Some algae.				
7 December 1974					
Comments:	Iced over. Snow drifts.				
8 February 1973	1	7.1	7.1	1	
Comments:	Caught with dip net. Non-quantitative. Water clear.				
22 March 1975					
Comments:	Very narrow and shallow. Water: clear, flowing. No fish sighted. Width: .7 m. Depth: 2 - 4 in. Bottom: sandy.				
5 April 1975					
Comments:	Bottom: clear sandy. Width: 1/2 - 1-1/2 m. Depth: 2 - 8". No fish sighted upstream from bridge. Downstream - 1 creek chub (nothing else sighted). Chub caught below Weir. Some gravel downstream.				
19 April 1975					
Comments:	Downstream - water opaque, algae on bottom - hardpan and small rocks. Width: 1 m. Pool below Weir 1" deep. 2 fathead minnows and 2 creek chubs. Upstream, no fish. Width: 1 - 3'. Variable bottom, some silty, some sandy, some hardpan. Mating crawdads. Shallow. Depth: 2 - 8". All types of algae.				
3-4 May 1975	1			1	
Comments:	Dip net sample. Mucky - flowing clear.				
17 June 1975	85			7	1.16
Comments:	Water: clear. Bottom: gravel. Depth: 10 - 15 cm. Width: 1 - 1-1/2 m.				
25-27 June 1975	3			3	1.099
Comments:	Depth: 30. Width: 2-1/2 m.(constant). Bottom: sandy, gravel. Water: turbid.				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity

9-11 July 1975
Comments: Too shallow & algae choked to seine . Width: 1/4 - 1 m. Depth: 1 - 6". Water temp.: 27.0°C. Bottom: sand, very algae choked. Unestimable number of crayfish (young) (size 5 mm - 10 mm). A few fish sighted - mostly fry (as small as 3 mm). Species undetermined.

24 July 1975
Comments: Too shallow to seine. Width: 1/4 - 1 m. Depth: 1/2 - 6". Bottom: sand. Water: clear. Many snails. Fish sighted above Weir in pool below the sample area. Also a few in rip-rap at upper portion of sample area. Still much algae. Large quantities up on both banks due to recent high waters.

12 August 1975
Comments: Not seined due to shallow water. Depth: 1" - 4". Width: 1/4 - 1 m. Bottom: sand. Water: clear. Large school of fish sighted just below sample area. In station, tremendous #'s of crayfish fry & small snails. Fish fry also sighted much algae growth. Larger fish also sighted. 1 water snake sighted.

26 August 1975
Comments: Water temp: 28°C. Water: turbid.

23 January 1976
Comments: Frozen. Snow covered.

BLACK CREEK FISH SUMMARY SHEET

Station 6
Driesbach Drain above Brush College Road

Date	Number of Individuals	Total Weight	Weight of Individual	Number of Species	Species Diversity
24-25 July 1973	201	709	3.53	9	1.697
Comments:	Sampled by J. Hamelink				
15 March 1974	111	779.5	7.02	5	.894
Comments:	one data - after 3 halls & sein. # individuals - 310, total weight - 3059.5 q, # species - 8, FSD - 1.257.				
12-13 April 1974	69	393.3	5.7	7	1.225
20-21 May 1974	10			2	.693
Comments:	Stream recently channelled.				
19-20 June 1974					
Comments:	Many small fry. Sample not possible due to algae.				
23 July 1974					
Comments:	No fish above bridge, many below. Rip-rap under bridge may be effective barrier to fish movement. Downstream from bridge, teems with young fish (predominance of Eb). Stream polluted with domestic sewage.				
13 September 1974					
Comments:	No fish above bridge - below, lots of fish. Water temp.: 14°C. O_2 8 ppm. Bottom: silty, algal growth much reduced from July. Depth: 1 - 2". Width: 3'.				
18 October 1974	32	145.3	4.54	3	.656
Comments:	Non quantitative. Water: clear. Bottom: decaying organic matter.				
6-7 December 1974					
Comments:	No sample. Stream frozen.				
7-8 February 1975					
Comments:	No sample. Stream frozen. Ice very thick.				
23 March 1975	3			1	
Comments:	Flowing slowly, green water. Bottom: silty sand. Depth: 2 - 12". Width: 1 m.				
5 April 1975					
Comments:	Water: clear. Bottom: silt, some debris.				
19 April 1975					
Comments:	Water: clear. Bottom: sandy & silty. 3 small schools of creek chubs.				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
3 May 1975	9			1	
Comments: Flowing clear. 100 meters seined, then 40 meters.					
29 May 1975	174			9	1.706
17 June 1975	63			6	1.352
Comments: Bottom: sandy & silt. Depth: 10 - 30 cm. Width: 1 - 2 m. Water: murky.					
25 June 1975	129			10	1.511
Comments: Depth: 40 - 50 cm. Water: turbid, slow current. Width: 1-1/2 to 2-1/2 m. Bottom: sandy.					
9-11 July 1975	68			7	1.333
Comments: Stream very choked with algae (sometimes goes across entire stream) Water temp.: 27.5°C. Depth: 5 - 20". Width: 1 - 2-1/2 m. Bottom: sand. Weir below bridge at Station 6 has had rip rap removed from channel about 1 ft. wide, a small pool formed directly below Wier overflow by removal of rocks. Done July 9, 1975.					
24 July 1975	105			8	1.611
Comments: Width: 1/2 - 3 m. Depth: 30"(max). Bottom: silty & clay. Water: clear. Algae present in moderate to large amounts.					
11 August 1975					
Comments: Not seined due to dense algae mass (in lower portion across entire stream). Density: up to 12" (to bottom of some positions of stream) several types present. Numerous large schools of fry. Larger fish sighted also. Water: turbid. Bottom: silt & muck. Width: 1 - m. Depth: 4 - 12".					
26 August 1975	94			9	1.813
Comments: Depth: 12 - 18". Width: 1 - 2 m. Bottom: muck (silty). Water: turbid. Some algae (loss of 20% of the fish due to slight accident after seining.)					
20 September 1975	63			11	1.729
Comments: Water temp.: 15.5°C., 60°F. Bottom: silty. Width: 1/2 - 2-1/2. Depth: 6" - 12". Water slightly turbid.					
10 October 1975					
Comments: Fish taken back. Depth: 2" - 1'. Width: 1/4 - 2 m. Bottom: Clay-muck. Water: turbid (clear at top). Very putrid smell.					
15 November 1975					
Comments: Water: turbid. Iced completely actoss 3/8 - 1/2" thick. New weather station put up down the path from water sample area.					

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
13 December 1975					
Comments:	Dip netted area. Water: cloudy. Max depth: 8". Muck filled in lower end of sample area. Bottom: silt. Many isopods & Corixidae. 4 green sunfish (25 - 40 mm). No schools sighted.				
23 January 1976					
Comments:	Frozen. Snow covered.				
26 March 1976	210			8	1.525
Comments:	3 seine hauls. H' biomass sample. Fewer fish than anticipated. Lots of grass litter in stream. Seining difficult. Bottom: sandy.				
22 April 1976	878			11	
Comments:	Heavily choked with cladophora. Extracted 500 lbs of wet algae. Three seine hauls.3 ft. Natrix found. Seining 20% efficient. Bullfrog (2) tadpoles, leeches (4) & crayfish (40) also found.				
24 May 1976	12			3	
Comments:	Almost completely choked with cladophora. Impossible to seine & almost impossible to dip net. 3 photos taken. Few fish sighted.				
24 June 1976	37			4	
Comments:	Still algae choked. Huge masses of cladophora decaying. Bottom: sandy & organic muck. Hydrodicton (water net) becoming abundant - usually only occurs in September. Dip netted.				
21 July 1976	139	417.7	3.01	8	
Comments:	Depth: 5 - 18". Water: clear algae growth heavy on bottom. At lower end of sample area, algae was 12" deep. Bottom: very much organic decay - black mucky.				
7 October 1976	10	49.9	4.99	3	0.9502
Comments:	No. fish		Ave. wt.		
pp	6		2.0		
Ca	2		15.8		
Ns	2		3.4		
31 March 1977	67			7	1.575
21 April 1977	143	1679.7	11.7	8	1.581
9 May 1977	269			17	2.153
23 May 1977	129			14	2.0081
13 June 1977	177			16	2.179

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
13 July 1977	307	1590.4	5.2	16	1.670
23 August 1977	23	46.8	2.0	4	0.905
7 November 1977	495	4857.4	9.8	18	1.842

BLACK CREEK FISH SUMMARY SHEET

Station 12
Black Creek above Ward Road

Date	Number of Individuals	Total Weight	Weight of Individual	Number of Species	Species Diversity
24-25 July 1973	89	249	2.80	13	2.111
15 March 1974					
Comments: No sample.					
12-13 April 1974	65	144.4	2.22	10	1.777
Comments: Bottom: muddy. 2 seine hauls.					
20-21 May 1974	16	34.0	2.13	8	1.841
19-20 June 1974					
Comments: No sample. Water level lower than in April. Silty - south bank apparently sprayed with herbicide.					
23 July 1974	127			12	2.284
Comments: 25 meter pool. Water: turbid. Bottom: muddy and sandy. Some algae in water. Depth: 2" - 2' in pools. Many adult-sized fish.					
18-19 October 1974					
Comments: No sample. Stream has just been dredged. Evidence of tracks on bottom. Bottom: silty and water cloudy.					
7 December 1974	67	58.5	.88	9	1.104
Comments: Intensive dip-net sample.					
8 February 1975					
Comments: No sample. Iced over.					
22-23 March 1975	1025	1707.7	1.67	9	1.288
Comments: Seined twice. Water: turbid. Bottom: silty with much debris. Banks recently pulled, no foliage. (bridge constructed). Width: 2 - 3 m. Depth: 6 - 24".					
5 April 1975	752	1176.4	1.56	10	1.487
Comments: Seined twice. Bottom: turbid & muddy, much debris.					
19 April 1975	552	1388.3	2.51	14	1.865
Comments: 2 seine hauls (quantitative). Width: 2 - 3m. Depth: 6 - 12". Water: muddy. Levelled around bridge.					
29 May 1975	20			7	1.708
Comments: Bridge nearly complete. Many dead fish floating. Bottom: very sandy.					
17 June 1975	54			10	1.976
Comments: Water level very high (up to 130 cm.). Next day water level dropped ≈ 1 meter. Heavy rains the preceeding 3 days.					

<table>
<tr><th>Date</th><th>Number of Individuals</th><th>Total Weight</th><th>Weight per Individual</th><th>Number of Species</th><th>Species Diversity</th></tr>
<tr><td>25-27 June 1975</td><td>53</td><td></td><td></td><td>9</td><td>1.414</td></tr>
<tr><td>Comments:</td><td colspan="5">Depth: 60-90. Width: 6 - 7 m. Poor seining due to current width. Water: turbid (very).</td></tr>
<tr><td>9-11 July 1975</td><td>220</td><td></td><td></td><td>12</td><td>1.605</td></tr>
<tr><td>Comments:</td><td colspan="5">Water clear, algae along sides, but main channel clear. Water temp. 20.5°C. Bottom: sand, gravel. Width: - m. Depth: 2 - 16".</td></tr>
<tr><td>24 July 1975</td><td>192</td><td></td><td></td><td>16</td><td>1.745</td></tr>
<tr><td>Comments:</td><td colspan="5">Depth: 2' max. Width: 2 - 6 m. Water: clear, some algae. Bottom: sand & gravel.</td></tr>
<tr><td>12 August 1975</td><td>15</td><td></td><td></td><td>7</td><td>1.715</td></tr>
<tr><td>Comments:</td><td colspan="5">Water: semi-turbid (much junk floating in it - scummy). Dead fish on sand bars. Depth: 4 - 16". Width: 6 - 7 m. - 2m. Bottom: sand.</td></tr>
<tr><td>9 September 1976</td><td>511</td><td>2685.1</td><td>5.3</td><td>16</td><td></td></tr>
<tr><td>20 September</td><td>314</td><td></td><td></td><td>9</td><td>1.123</td></tr>
<tr><td>Comments:</td><td colspan="5">Water temp. 20°C. - 68°F. Water: clear. Width: 1 - 4 m. Depth: 2" - 18". Bottom: sandy.</td></tr>
<tr><td>10 October 1975</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">Fish samples taken to lab. Water: clear. Bottom: sand & gravel. Depth: 4" - 24". 30" pool. Width: 1-2 - 3 m.</td></tr>
<tr><td>15 November 1975</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">1 school of young of the year (PN 40-60 mm). 2 schools of mixed (LC, shiners, 90% PN). Schools sighted in deep pools of sample area only. Little bit of ice on the edges. Water: clear (3°C). Bloom of Cladophora since last trip. All decaying on bottom. Width: 1-3m. Shallow except for pools.</td></tr>
<tr><td>13 December 1975</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">Depth: 8 - 24". Water level is up - turbid. Width: 2 - 5m. Bottom: sand & gravel. Dip netted - none caught, but some sighted.</td></tr>
<tr><td>23 January 1976</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">Frozen. Snow covered.</td></tr>
<tr><td>20 February 1976</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">4 photos taken. 20 ft. deep.</td></tr>
<tr><td>26 March 1976</td><td>738</td><td></td><td></td><td>13</td><td>1.525</td></tr>
<tr><td>Comments:</td><td colspan="5">3 seine hauls.</td></tr>
<tr><td>22 April 1976</td><td>1072</td><td></td><td></td><td>14</td><td></td></tr>
<tr><td>Comments:</td><td colspan="5">Bottom: sandy, some algae, but fairly clear. Water: clear. Width: 2 - 4 m. Depth: 3" - 18". 2 seine hauls.</td></tr>
</table>

Date	Number of Individuals	Total Weight	Weight of Individuals	Number of Species	Species Diversity
24 May 1976	776			14	
Comments:	Channel fairly clear, but extensive algal build up, especially along the stream edges. Seined entire 100 m once and seined lower 50 m 2 more times. Few fish in upper half. Only 2 - 3" deep. Lower 50 is teeming with fish. Bottom: sandy, clean. Water: slightly turbid.				
24 June 1976	510	1679.4g	3.30	16	
Comments:	Lots of algae. Seined 2 times with stream sample split into 2 sections.				
21 July 1976	348	840.6	2.42	17	
Comments:	Water: clear. Algae is plentiful. Depth: 4" - 30" (pools before bottom end of station). Bottom: sandy, cover of organic matter. Seined twice.				
9 September 1976	511	2685.1	5.3	16	1.9958

Comments:

# fish	Ave. Wt.	# fish	Ave. Wt.	# fish	Ave. Wt.
Sa 110	11.2	Nc 17	2.7	Lc 10	5.6
Pp 49	2.9	Nst 2	1.8	Ms 3	18.7
Pr 50	2.5	Ns 1	5.1	Tr 57	3.0
Eb 4	2.8	Na 1	1.7	Dc 3	5.9
Ca 82	3.6	Cc 113	4.0	Ccc 10	5.5
		Fr 12	0.9		

7 October 1976					
7 October 1976	904	2386.6	2.6	18	2.214

# fish	Ave. Wt.	# fish	Ave. Wt.	# fish	Ave. Wt.
		En 1	1.6	Lc 3	9.8
Sa 109	5.1	Nst 53	1.7	Ms 1	9.5
Pp 72	2.0	Ns 163	1.7	In 1	2.2
Pr 214	1.7	Na 13	1.0	Dc 14	11.1
Eb 109	1.8	Eo 1	3.1	Cc 5	5.5
Ca 74	4.1	Cc 36	4.6		
Nc 10	2.5	Fr 25	0.9		

4 November 1976	93	260.6	2.8	13	1.987
Comments:	Dipnet.				
17 March 1977	90	198.36	2.2	1	0.000
Comments:	2 seines.				
21 April 1977	307	769.3	2.5	13	1.777
10 May 1977	554			15	1.912
13 June 1977	22	207.5	9.4	4	1.240
Comments:	92.9g of the total wt. is due to 4 individuals of *L. microlophus*.				
24 August 1977	4	10.6	2.7	3	1.040
Comments:	These fish from Stations 12 & 28				

BLACK CREEK FISH SUMMARY SHEET

Station 13
Wann Drain above Killian Road

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
24-25 July 1973	206	829	4.02	13	1.6-5
12-13 April 1974	45	270.4	6.01	8	1.340
23 July 1974	135			12	2.082
Comments:	Bottom: sand, silt, gravel. Water: very low, clear. Lots of pools. Non-quantitative dip net samples. # individuals 12 total weight 10.8. # species 4, FSD 1.119.				
11 September 1974				↑ 11	
18 October 1974	47			6	
Comments:	Some algae, running clear in some parts, a few small fish sighted.				
7-8 February 1975					
Comments:	Ice on sides. Fish all sizes.				
22-23 March 1975	67	9203.1	137.36	9	1.592
Comments:	Seined twice. Flowing clear, muck bottom, heavy vegetation (mostly dead straw). Width: 1/2 - 1-1/2 m. Depth: 2 - 12".				
5 April 1975	111	364.7	3.29	13	1.712
Comments:	Seined twice. Water: flowing, silty. Bottom: silt & grass.				
19 April 1975	247	867.2	3.51	15	1.830
Comments:	Flowing, clear, spikerush, grasses, algae.				
29 May 1975	198			15	2.076
17 June 1975	74			14	1.996
Comments:	Seined twice (inefficient due to high waters and weedy conditions). Bottom: gravel & grass. Depth 20-60 cm. 12" snapping turtle caught along with burrowing mayfly.				
25 June 1975	27			9	1.941
Comments:	Depth: 40-70. Width: 1 - 2-1/2 m of channel, flooded to 2-1/2 m. Bottom: sandy, fairly firm. Water: turbid. Reeds growing along edge.				
10 July 1975	31			13	2.061
Comments:	Water: cloudy. Bottom: sand, much aquatic vegetation (especially upstream). Water temp. 21.0°C. Depth: 12 - 16". Width: 1/2 - 3. Large snake on rocks.				
24 July 1975	29			9	1.830
Comments:	Depth: 16". Width: 1/4 - 3 m. Bottom: sand (rock from rip rap falling in). Water: slightly cloudy.				

Date	Number of Individuals	Total Weight	Weight of Individual	Number of Species	Species Diversity
10 July 1975	31			13	2.061
Comments:	Water: cloudy. Bottom: sand, much aquatic vegetation (especially upstream). Water temp. 21.0°C. Depth: 12 - 16". Width: 1/2 - 3 m. Large snake on rocks.				
24 July 1975	29			9	1.830
Comments:	Depth: 16". Width: 4 - 3 m. Bottom: sand (rock from rip rap falling in). Water: slightly cloudy.				
13 August 1975	21			5	1.364
Comments:	Only seined in pool area. Upper channel almost choked with aquatic vegetation. Small amounts of algae. Seined 2 times. Several topminnows sighted. None caught. Width: 3 - 1/2 m (sampled area). Depth: 16" constant. Bottom: sandy silt. Water: semi-clear.				
26 August 1975	21			11	2.215
Comments:	Depth: 12 - 24". Width: 1 - 3 m. Bottom: sandy. Many sedges. Water: cloudy.				
20 September 1975	28			11	2.256
Comments:	Water temp.: 18°C, 64°F. Water: clear, very slightly cloudy. Bottom: sandy & silty. Width: 1/2 - 2-1/2 m. Depth: 12 - 18".				
10 October 1975					
Comments:	Width: 1/4 - 2-1/2 m. Water: clear. Depth: 24". Bottom: sand & muck. Took back to lab all unmarked fish. 3 branded fish caught.				
15 November 1975					
Comments:	Dip netted (IN, NSP, SA). Ice on edges to to 1/2" thick. Temp. 1.5 - 2°C. Water: turbid. Bottom: muck. Width: 1-1/2 to 2 m. Depth: up to 2' in a deep pools ≈ 12-20. Lots of decaying algae & bullrushes. Chlodophora on bottom.				
13 December 1975	91			16	
Comments:	Depth: 12 - 18" evenly deep in center. Width: 3 m. 1 m. at narrow portion. Water: cloudy. Bottom: sandy. 2 marked fish caught.				
23 January 1976					
Comments:	Frozen. Snow covered.				
20 February 1976	180			21	
Comments:	New sampling procedure. Old 50 m in station pool. Contiguous with one under bridge. Photo taken.				
22 April 1976	151			16	
Comments:	2 seine hauls. Water: clear. Depth: 6 - 24". Width: 1/2 - 3 m. Bottom: clean, no algae, sand & clay. Bullrushes growing.				
23 April 1976	153 marked 278 total				
Comments:	Under bridge below station. 348 total, 303 marked, 3 recaptured.				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
24 May 1976	205			19	
Comments:	Includes under bridge. First sighting of quillback carpsucker since 1974. 2 seine hauls. Photo taken of quillbacks.				
June 1976	283			15	
Comments:	CA were less than 35 mm with the exception of individual, 1 CC adult. Much algae - before & after seining picture taken. Bottom: clean. Depth: 2 ft. in many places.				
21 July 1976	236			14	
Comments:	Very much algae present. Seined 3 times. Bottom: mucky organic matter. Water: turbid. Depth: 10" average.				
8 October 1976	281	463.0	1.6	12	2.902
31 March 1977	56			11	1.709
21 April 1977	113	363.2		8	1.487
10 May 1977	360			16	

BLACK CREEK FISH SUMMARY SHEET

Station 15
Black Creek downstream from entry of Smith Fry Drain

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
12-13 April 1974	210	1667.0 +59 large fish	7.94	12	2.037
20-21 May 1974	50			9	1.782
Comments:	Eroded bank.				
23 July 1974					
Comments:	Non-quantitative sample. 3+ species. Bank had been partially pulled, very muddy in other places. Bottom: sandy & gravelly in some places.				
13 Sept. 1974	261	757.4	2.90	14	1.253
18 October 1974	63			9	1.570
Comments:	Water: very cloudy & silty. Presumably from extensive erosion banks. Very silty & muck bottom. Very low flow.				
6-7 December 1974	160	115.8	0.72	6	.53
Comments:	Ice Cover. Observed fish through 2 - 3" clear ice. Tend to stay in eddies. Too sluggish to fight current. Intensive dip net sample.				
7-8 February 1975					
Comments:	Ice covered. Small fry.				
22-23 March 1975	114	384.9	3.38	9	1.967
Comments:	Bottom: silty, rock. Water: flowing clear. Depth: 2 - 10".				
5 April 1975	158	245.7	1.56	10	1.700
Comments:	2 seinings. Depth: 3". Bottom: silt.				
19 April 1975	274	911.4	3.33	12	1.798
Comments:	Bottom: clay & silt. Seined twice.				
3 May 1975	99	200.9 + 18 not weighed	2.03	9	1.577
Comments:	Flowing clear. Bottom: rock gravel, some silt. One upper seining, one lower seining.				
19 May 1975					
Comments:	Many small fry. Bridge above finished.				
29 May 1975	98			11	1.931
17 June 1975	119			10	1.489
Comments:	Water: slightly turbid. Depth: ≈ 20 cm. Bottom: gravel, clay & rock.				

Date	Number of Individuals	Total Weight	Weight of Individuals	Number of Species	Species Diversity
25 June 1975	39			8	1.667
Comments:	Swift current - difficult to seine. Depth: 30 - 40 cm. Width: 5 m. (constant). Bottom: sand, gravel, clay (rocks at bend).				
10 July 1975	162			10	1.397
Comments:	Many little fish too small to catch. Water level very low. Numerous pebble bars. Depth: 4". Width: 2 - 4 m. (upper portion) Lower 50 m. - Depth: 16" (max.). Width: 3". Bottom: sand & clay. Water temp.: 23.0°C. Still a lot of algae.				
24 July 1975	201			11	1.465
Comments:	Upper 50 meters - Bottom: clay & gravel. Water no more than 6" deep. Many schools sighted & able to swim through net. Lower 50 meters - Depth: 20" (max.). Width: 2 - 4 m. Bottom: clay & sand. Numerous sand bars at both sites.				
12 August 1975	21			2	0.191
Comments:	Eb fry were 20 - 25 mm. in length. Water temp.: 27.3°C. at lower station. Bottom: sandy, gravel. Depth: 1/2 - 3". Width: 2 - 5 m. Water: clear but scum on top, some algae growth, many fry. Upper 50 meters - Water: foul, scum floating all through water. Bottom: clay, some algal growth. Width: 3 - 4 m. Depth: 3" - 12".				
26 August	upper 41 lower 32			7 total 8 of 8	1.340
Comments:	Upper: 1 seine (no block). Depth: 5 - 12". Width: 3 - 6 m. Bottom: gravelly. Water: turbid. Too wide & fast to use block seine. Lower: 1 seine (no block). Depth: 5 - 18". Width: 2-1/2 - 5 m. Bottom: gravel to clay with rocks. Water: turbid.				
19 September 1975	44			5	1.255
Comments:	Upper 50 m: no fish seen. Aquatic plants, algae low current. Water: low. Depth: 1 - 8". Width: 1.5 - 5. Water: clear. Conditions similar to last fall. Few fish sighted.				
10 October 1975					
Comments:	All fish taken back to lab. Water: clear. Upper: clay bottom with sand and gravel bars. Depth: 4 - 5". Width: 2 - 4 m. Lower: clay bottom. Depth: 4" - 2'. Width: 3 - 4 m.				
15 November 1975					
Comments:	Temp. at Wier: 2.5°C. 13 ppm O_2; ≈7.4 pH. Water: slightly cloudy. Ice on edges, some free floating with sand (could be anchor ice). Fish sighted.				
13 December 1975					
Comments:	Water: cloudy. Depth: 8". Bottom: gravel. Sighted PP, PN, NSP above study area.				

Date	Number of Individual	Total Weight	Weight per Individual	Number of Species	Species Diversity
23 January 1976					
Comments:	Frozen. Snow covered.				
20 February 1976					
Comments:	Backwatered. 5 ft. deep. Too deep for sampling. Photo taken.				
8-9 April 1976	(upper)60			3	
	(lower) 5				
Comments:	Lower 50 m. Water: clear. Bottom: clay. Few fish sighted. 1 seine haul. Depth: 3 - 18". Fish are all small & pass through net. Upper - Water: clear. Bottom: sand & gravel & clay. No fish seen. Depth: 3 - 4". Water level down.				
13 May 1976					
Comments:	Lower 50 - Bottom: clay, sand & rip rap. Depth: 4" - 30". Width: 4 m. Water: clear. Biomass. 3 seine hauls. Enormous quantities of algae - mostly cladophora. Continuous down both banks and covering 50% of the bottoms in long strands growing from rocks, etc. 6 carp over 300 mm. One over 400 mm. None caught. Upper 50 meters - More algae than lower. Width: 4 - 5 m. Water: clear. Depth: 2 - 18". Bottom: sand & clay. Biomass: 1 seine haul.				
9 June 1976	(upper)102			9	
	(lower)166			13	
Comments:	Lower - low flow. Bottom: clean, considerable algae build-up decaying piles washed downstream. Upper - 3 sein hauls. Captured 1 2" snapping turtle.				
10 July 1976	(upper) 54			9	
	(lower)915			14	
Comments:	Lower - Depth: 5 - 16". Many of the carp 35 mm. Water: clear. Bottom: clay & sand. Both areas seined twice.				
3 August 1976	(upper) 57	1962.4g		8	
	(lower)1073	35.9		17	
Comments:	Upper - Water: fairly low. Depth: 1/2 - 12". lower 12" max. Mostly 2" - 4". Bottom: clay, sand, decaying organic matter. Water clear.				
7 October 1976	297	549.3	1.8	15	2.193(lower 50m)
7 October 1976	277	304.3	1.1	8	1.24 (upper 50m)
17 March 1977	8			6	1.733

BLACK CREEK FISH SUMMARY SHEET

Station 16
Wertz Drain between Notestine Road and Black Creek

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
12-13 April 1974	33	269.9	8.18	7	1.713
Comments: Bad technique.					
19-20 June 1974					
Comments: Recently channeled.					
23 July 1974					
Comments: Many small schools of silverjaws. Bottom: clay. Water: clear. Stream choked with algae.					
14-15 Sept. 1974	554	1046.99	1.89	11	1.521
22-23 March 1975	337	988.0	2.94	11	1.872
Comments: Seined twice. Bottom: clay, flowing. Width: 1 - 1-1/2.m. Depth: 3 - 15".					

BLACK CREEK FISH SUMMARY SHEET

Station 17
Black Creek immediately upstream from entry of Wertz Drain

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
12-13 April 1974	108	955.6	8.85	10	1.689
Comments:	One CC not weighted TL=250 mm.				
20-21 May 1974	100				
Comments:	Number of species captured between St. 22 & 17, 9.				
19-20 June 1974	4	7.3	1.83	2	.562
Comments:	Recently pulled bank-sand & mud.				
19-20 June 1974	62	196.1	3.16	5	.772
Comments:	3/4 mile below Station 17.				
19-20 June 1974	42	99.7	2.37	7	1.229
Comments:	1 - 1/2 miles below.				
23 July 1974	7	13.1	1.87	3	.956
Comments:	Non-quantitative dip-net sample. Also 181 individuals, 9 species. FSD = 1.022. Bottom: sandy. Water: clear, not algae choked; banks recently worked. Dumping rip-rap upstream about 1/2 mile away.				
14-15 Sept. 1974	9	45.1	5.01	5	1.427
Comments:	Quantitative below St. 22 & 17 near new pond.				
18 October 1974	55	81.5	1.48	9	1.350
Comments:	Water polluted. Bottom: mucky. Pigs. Choked with algae.				
22-23 March 1975	268	624.3	2.33	7	1.450
Comments:	Seined twice. Bottom: sand, silt. Width: 2 - 5 m.				
3 May 1975	240				
Comments:	Flowing clear. Bottom: sand & clay & rock.				

BLACK CREEK FISH SUMMARY SHEET

Station 18
Richelderfer Drain above Darling Road

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
15 March 1974	9	10.3	1.14	5	1.465
Comments:	Non quantitative sample.				
12-13 April 1974					
Comments:	Non quantitative sample. Pike 622 mm TL.				
23 July 1974	87			6	.972
Comments:	Not seined (choked with algae, sandy bottom). 2 dip net samples (combined) (predominance of Eb).				
14-15 Sept. 1974	10	12.9	1.29	1	
Comments:	Silty, reduced algae growth. Rip rap above bridge provides riffle near St. 18 below bridge. # ind = 154. Total weight 620.9, # species 6. FSD = 1.028.				
18-19 October 1974					
Comments:	Non-quantitative. Decaying blue-green algae. Water: flows clearly. Bottom: silty film over decaying organic black layer. Few fish.				
7-8 February 1975					
Comments:	Small fish. Section below bridge is open.				
22-23 March 1975	11			4	1.342
Comments:	Bottom: clear flowing, silty. Depth: 4 - 12". Width: 1 - 2m.				
5 April 1975	110	276.7	2.52	9	1.641
Comments:	Seined twice. Water: muddy. Bottom: sand & silt. Some fish lost in rip rap & muskrat holes.				
19 April 1975	29	54.9	1.89	5	1.367
Comments:	Bottom: gravel, silt & sand. Water: clear.				
3 May 1975	217			9	
Comments:	Water: flowing clear. Bottom: sand & silt, gravel.				
29 May 1975	271			11	1.809
Comments:	Bottom: gravel, silty & sand. Width: 1 - 2 m. Depth: 4 - 5".				
17 June 1975	178			9	1.514
Comments:	Bottom: sandy, gravel. Width: 2 m. Depth: 20 cm. (both rather constant through entire sample area).				
25 June 1975	173			10	1.718
Comments:	Width: 2-1/2 - 3m. Depth: 30 - 40 cm. Bottom: sandy.				
10 July 1975	392			11	1.246
Comments:	Depth: 2 - 12". Width: 1/2 - 3 m. Bottom: sandy, gravel. algae growth present (moderate bloom). Water temp. 21.75°C.				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
24 July 1975	248			9	1.75
Comments:	Depth: 1/2" - 6". Width: 1/2 - 3 m. Bottom: sandy gravel. Algae growth present (moderate bloom). Water temp.: 21.75°C.				
12 August 1975	59			7	1.399
Comments:	416 fry caught on algae in net algae quite prevelant (species of fry FN, PN, but mostly EB). Depth: 1 - 18". Width: 1/2 - 3 m. Bottom: sand. Water: clear.				
26 August 1975	179			10	1.634
Comments:	Depth: 6 - 10". Width: 1 - 2 m. Bottom: sand & muck. Water: turbid. (Bucket spilled, lost an undetermined # of fish, however loss probably small as numbers counted agree with first estimate of catch).				
20 September 1975	562			8	.99
Comments:	Water: clear. Bottom: gravel & sand. Depth: 1 - 8". Width: 1/2 - 2 m. 4 major schools of fish sighted. 50% captured. Lots of algal growth in bottom of stream attached to rocks & gravel. Almost every Eb is an adult.				
10 October 1975					
Comments:	Samples taken back to lab. Depth: 4 - 8". Width: 2 m. Water: clear. Bottom: sand and algae (very heavy).				
15 November 1975					
Comments:	Some ice on edges. Bottom half of carp sighted. Water temp. above Gorrell is 7.5°C. (in Black Creek) in the Gorrell is 4°C. Below Gorrell entrance is 2.5°C. - huge quantities of dying cladophora.. Water is very clear. Very few fish in area (2 small Eb). Some seen in Gorrell.				
13 December 1975					
Comments:	NSP, PN, PP many sighted size range 40 - 70 mm. Water: cloudy. Fast current. Cladophora still present. Depth: 2 - 12" (at falls). Bottom: gravel.				
23 January 1976					
Comments:	Frozen. Snow covered.				
8-9 April 1976	93			6	
Comments:	Water Temp. 16.5°C. Water: clear. Bottom: sand. Depth: 2" - 8". Width: 1-1/2 - 2 m. Algae attached to everything in the stream. H' = 1.098.				
13 May 1976					
Comments:	Log forming hole & sand bar in middle of station. Algae alog banks, but channel clear. Bottom: sand & gravel. Width: 1.5 - 2.0 m. Depth: 4" - 18".				
9 June 1976	35			6	
Comments:	Dip netted. Heavy algae growth.				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
9 July 1976	216			11	
Comments:	Clear of algae, rather shallow. Mostly less than 6" deep. Up to 12" in spots. Water is quite warm. Bottom: sand & gravel.				
3 August 1976	561	596.7	1.06	7	
Comments:	Very much choked with algae. Fish caught by dip netting pool at upper end of station. Depth in pool 18" max. Rest of station 2". Water: turbid. Bottom: decaying organic matter & sand.				
29 September 1976	176	675.1	3.8	4	0.296
Comments:	165 Ns.	Ave. wt.	3.9		
	2 Pr.		2.3		
	6 Eb		2.2		
	3 Nc		3.2		
	(dipnet; not quantitative)				
7 October 1976	193	455.5	2.4	6	0.386
Comments:	No. fish	Ave. wt.	No. fish		Ave. wt.
	Sa 2	22.7	Pp 5		.9
	Pr 5	2.5	Eb 2		1.9
	Ca 1	7.1	Ns 178		2.1
4 November 1976	189	469.5	2.5	7	.473
Comments:	171 Ns				
21 April 1977	608	2422.4	4.0	13	1.816
9 May 1977	197			13	2.076
13 July 1977	247	784.6	3.2	12	1.710

BLACK CREEK FISH SUMMARY SHEET

Station 19
Smith-Fry Drain between Indiar [illegible] Highway #101 and Antwerp Road (NE corner of intersection.)

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
12-13 April 1974	260	570.8	2.20	9	1.322
19-20 June 1974					
Comments: Fish fry caught under bridge. Upstream, PN, Johnny darters. Water: very clear.					
July 1974				6	
Comments: Seined 2 - 20 m. sweeps many cray fish, fish fry. Bottom: silty.					
18-19 October 1974					
Comments: Pooled up. No net flow. Water: relatively unpolluted. Bottom: silty. Evidence of muskrats. 2 small fish spotted.					
7 December 1974					
Comments: Thick ice.					
8 February 1975					
Comments: Ice clear. Some riffles free. Small fish.					
22-23 March 1975	34	64.1	1.89	7	1.668
Comments: Seined 3 times. Water: flowing clear. Bottom: silty rock. Width: 1 - 3.5 m. Depth: 4 - 15".					
5 April 1975	27	40.5	1.5	6	1.610
Comments: Seined twice. Water: flowing clear. Bottom: rock, silt, and debris. Width: 1/2 - 2 m. Depth: 4 - 15".					
19 April 1975					
Comments: 1 crayfish, pregnant Ec. Bottom: muddy, clay in places with some gravel. Water: clear. 1/2 - 3 m. wide. Up to 15" deep.					
3-4 May 1975	40-45			4	
Comments: Bottom: sand & clay. Flowing clear.					
29 May 1975	19			6	1.634
Comments: Depth: 1 - 8". Width: 1/2 to 1 m. Bottom: gravel, mud where deep. Many crayfish.					
17 June 1975					
Comments: Dip netted area. 2 Johnny darters and crayfish caught. No small schools of fish. Water: turbid. Bottom: rock & gravel.					
25 June 1975	6			4	1.242
Comments: Width: 1 - 2 m. Depth: 30 - 60 cm. Bottom: clay. 95 crayfish caught.					

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
10 July 1975	12			4	.983
Comments:	10" deep. Bottom - clay. Water - somewhat turbid. Low level. Water temp. 22.3°C. Flow is somewhat faster than normal at very low spots. 642 crayfish caught.				
23 July 1975	12			3	.918
Comments:	6" deep. 1/4 - 3 meters wide. Bottom - clay & gravel. Many crayfish (not quite as many as last trip however). Water clear				
12 August 1975					
Comments:	Crayfish pop. same as above. 1/8 - 2 meters wide. 1/2" to 4" deep. Bottom clay - no algae. Water clear.				
26 August 1975	52			6	1.328
Comments:	Depth 2 - 12". Width 1/2 - 2 m. Bottom: clay & rocks. Water cloudy. A vast number of crayfish netted.				
20 September 1975	57			8	1.370
Comments:	Water temp. 18°C. 66°F. Water turbid. Width .5 - 1.5 m. Depth 1" - 12". Bottom: clay-mud. Crayfish still very numerous.				
10 October 1975					
Comments:	Fish samples taken back to lab. Water - burbid. Bottom - clay to much. Depth 8" max. Width: 1/4 m - 2m. Animal waste smell very noticeable.				
15 November 1975					
Comments.	Water temp. 2°C. Some ice on edges. Slightly turbid water.				
13 December 1975					
Comments:	Various seeds (soybeans, oats) floating on the water (could be due to animal droppings). Water: turbid. Bottom: mucky clay. Smells very bad.				
23 January 1976					
Comments:	Frozen - snow covered.				
26 March 1976					
Comments:	H' Biomass. 2 seine hauls. Turbid. Burrowing mayfly. Many rainbow darters;♀full of eggs.				
22 April 1976	33			7	
Comments:	Moderate algae buildup. 1 seine haul. Shallow. Fish scarce Clay bottom.				
24 May 1976	31			6	
Comments:	Algae choked, shallow, dip netted - photo taken. Natrix seen.				
24 June 1976	17			7	
Comments:	Dip netted. Much algae. Clay bottom. All small fish.				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
21 July 1976	15			5	
Comments: Depth 1" - 12". Bottom - clay. Water - slightly turbid. Thousands of crayfish caught. No other fish sighted.					
31 March 1977	3			3	1.099

BLACK CREEK FISH SUMMARY SHEET

Station 20
Driesbach Drain above Antwerp Road

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
14-15 March 1974	104	308.6	2.97	4	.244
12-13 April 1974	269	682.5	2.54	6	.454
May 1974	≈100			4	
June 1974	0				
23 July 1974					
Comments:	Stream partially dried up. Filled with blue green algae and scum, foul odor - puddles an inch or two deep.				
22-23 March 1975	3	17.2	5.72	2	.637
Comments:	Seined twice. Water - flowing & clear. Silty & muddy bottom. 4 - 6" deep. 1 - 1-1/2 meters wide.				
5 April 1975	3	17.2	5.73	2	.637
Comments:	Water, clear. Bottom - very mucky. Stream iced over. 1-2 meters wide. 3 - 8" deep.				
19 April 1975					
Comments:	1 - 2 meters wide. 5 - 30" deep. Water muddy. Bottom - silty muck.				
2 - 3 May 1975	1			1	
Comments:	Sand, muddy bottom. Flowing clear. 1-8" deep. 1-2 meters wide.				
28 May 1975					
Comments:	Flowing clear. Bottom mud. 1-12" deep. $\bar{x}$ = 2-1/2". 1 meter wide. Walked station - sighted tadpoles, several dead crayfish, creek chub head, small school of tiny fish by bridge.				
17 June 1975	4				
Comments:	Sand bottom. 5 - 28 cm deep. 2 meters wide. Did not seine area.				
25 June 1975	38			5	1.152
Comments:	16 crayfish caught.				
10 July 1975	95			7	1.646
Comments:	Smells very badly of raw sewage. Stream almost dried up above station. Water clear about 1st 50 meters and then gets very cloudy for the last 50 meters. Flow = 0. No definite spot (such as drain pipe) where there is a definite start of cloudiness. No fish spotted until murky water (water low & 0 fish on other side of bridge). 10" deep. 35 dm - 3 cm wide. Bottom sand at top, mud at bottom (stirred up black).				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
24 July 1975	106			5	1.416
Comments:	Many crayfish & snails. Conditions same as above. 1-10" deep. 1/4 - 3 meters wide. Water under bridge black. Spotted top minnows, none caught.				
12 August 1975					
Comments.	Not seined due to decaying algae bloom. Water, very bright green. Some fry sighted, many crayfish, a few frogs. Water temp. 28.0°C. Depth: 8" max. Width: 1-3 meters. Bottom: sand, turning to muck at bottom of station.				
26 August 1975	113			7	1.313
Comments:	Depth: 5-18". Width 2-3 meters. Bottom-sand to muck. Water turbid.				
20 September 1975	559			10	1.190
Comments:	Water temp. 12°C. 53°F. Bottom - muck. Width: .5-1.5 m. Depth: 1" - 12". Water turbid. Algal growth-minimal (a few clumps); except for 10-20 adults each. All Pp & Eb Pp were young of the year. 30-40 mm.				
10 October 1975					
Comments:	Width 1/4 - 2-1/2 m. Depth 1-8". Bottom - sand at top, muck at lower. Water slightly turbid at top, very turbid at lower (due to muskrat activity). Water temp. 8.5°C. Depth has increased due to rip rap. Fish samples brought back.				
15 November 1975					
Comments:	Ice on water. Many small fish sighted (Eb & Pp) (ice 1/2" thick) silty bottom. Water cloudy. Slow current. Depth 1-12". Width - 2m. Water temp. upstream 1.5.2°C. , downstream .5 - 1°C. O_2 upstream 12.6. Horses have been walking through station.				
23 January 1976					
Comments:	Frozen, snow covered.				
20 February 1976	67			6	
Comments:	Bottom-silty, sand. Depth 6 - 24" (deeper than usual). Water turbid. Width 2-3 m. Photo taken.				
26 March 1976					
Comments:	2 seine hauls. H' Biomass sample. Water turbid. Bottom - sand, with silt layer. Lots of decaying grass.				
22 April 1976				7	
Comments.	2 seine hauls. Much spirogira choking seines. SS, crayfish, 1 leech. Flow is low, no water flowing out of drain tiles. Spring drought continues.				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
23 May 1976	55			5	
Comments:	Water stagnant, fouled under bridge from nearby house septic effluent. Choked with spirgyra and cladophora. Dip netted. Photos taken.				
24 June 1976	595	2123.8g	3.57	6	
Comments:	Sewage is backed up into study area. Lots of organic matter, muddy, mucky bottom. Over 1000 crayfish. Many small sized. Snails also numerous.				
21 July 1976	385	1051.9	2.73	6	
Comments:	Depth 8" max. Very low compared to previous levels. No flow noticeable. Dark organic decay at bottom. Coliform count at lower drain tile 10,000 +/100 ml. Very smelly. Algae not very heavy. Very numerous snails & crayfish.				
31 March 1977	31			4	
Comments:	Very mucky bottoms. 3, 22, 3, 3.				
9 May 1977	361			11	1.647

BLACK CREEK FISH SUMMARY SHEET

Station 21
Hamm Interceptor at Notestine Road

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
27 June 1975	235			12	1.442
Comment: 30-50 cm. deep. 3-4 meters wide. Bottom: clay. Water: turbid. Very much algae in area. Sign of high nutrient in area. 2 crayfish caught.					
9 July 1975	11			4	1.169
Comments: 2-8" deep. 1-2 meters width. Bottom: sand. Water: clear. Water temp. 16.8°C.					
25 July 1975	16			7	1.841
Comments: 4-8" deep. 1-1/2 - 2-1/2 meters wide. Bottom: sand & silt & clay. Water: turbid. Very little algae.					
11 August 1975	22			6	1.491
Comments: 1 - 2-1/2 meters wide. 1" - 5" deep. Bottom: sand. Water: clear. One school of fry seen, no larger fish caught or sighted (77 mm was largest). No algae.					
26 August 1975	61			11	2.044
Comments: Depth: 3" - 12". Width: 1 - 2 meters. Bottom: clay. Water: turbid.					
20 September 1975	22			6	1.427
Comments: Water temp. 16° C, 61°F. Water: clear. Width: 1 - 2 meters. Depth: 1-16". Bottom: sandy, silty (clean). Many of the fish heavily infested with Blackhead disease (all but 2).					
10 October 1975	21			6	
Comments: Width: 1 - 1/2 m. Depth: 5 - 8". Bottom: sand. NSP - 50-60 mm, IN 30-40 mm, PN, EC, Eb 25-30 mm.					
15 November 1975					
Comments: Water temp. 1.25°C. Water slightly turbid. Not much ice, some on edges. A little under bridge.					
13 December 1975					
Comments: Depth: 2 feet. Fast current. Water has greenish tint. Has been higher water level (evident from vegetation on the banks). Up 6 feet. Did not seine.					
23 January 1976					
Comments: Frozen. Snow covered.					
11 March 1976	77			6	
Comments: Water Temp. 2°C. 2 seine halls. Depth: 1 - 2-1/2 ft. Width: 4 meters. Bottom: sand. Water: turbid.					

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
8-9 April 1976	2			1	
Comments:	1 seine haul. 1 decomposing dog & 2 dead birds. Water: clear. 3" - 18" depth. 1 - 2 m. width. Bottom: muck.				
13 May 1976	10			5	
Coments:	Water temp. 11.8"C. Water: slightly turbid. Depth: 2 - 10". Width: 1/2 - 1-1/2 meters. Bottom: sand. 1 seine haul. 6 crayfish.				
9 June 1976	14			5	
Comments:	Stream clear, bottom sandy, edges with algae & pondweed.				
9 July 1976	15			7	
Comments:	Trees all cut and felled into stream. Dip netted in "accessible" pools. Water turbid. 6 - 10" deep. Very muddy water. Trees down for almost an entire month. Bank is going to be pulled. Crane in operation about 1/2 mile upstream.				
21 July 1976					
Comments:	They have cleared many of the trees out of the stream. Still has many roots and small limbs & debris in water and on banks. Makes it impossible to seine. Crane & pulling operations are 30 meters upstream. Should be through station by the next week. Old trees were piled up along upper banks.				
3 August 1976	25			6	
Comments:	Have not come through with crane. Stopped on other side of bridge. Pulled bank up to the bridge. Crane is 2/3 mile upstream from station. Water: very muddy & clay bottom. Lower end of station only an inch or two deep. Dip netted upper portion 8 - 12". Many roots and branches in stream.				
23 May 1977	7			4	1.277
Comments:	Choked with Cladophora. Few fish, caught with dip net.				

BLACK CREEK FISH SUMMARY SHEET

Stations 23 & 24
Black Creek Near the Maumee River

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
19-20 June 1974	16	398.0	24.69	7	1.862
Comments:	Sample immediately above mouth of Black Creek.				
23 July 1974	12			6	1.705
Comments:	Water: turbid. Bottom: sand & silt.				
14-15 September 1974					
Comments:	Non-quantitative sample. Gizzard shad, spotfins, bluegill & green sunfish. 2 small carp. Bottom: silt & mud. Water: turbid.				
18-19 October 1974	854	2240.6	2.63	11	.613
Comments:	Recently banks pulled and vegetation removed. Water very turbid. Bottom of deep muck. Net flow very low. Non-quantitative samples taken of two 20 ft. pools.				
7 December 1974	171	196.9	1.15	8	
Comments:	Station 23-24. Depth: 4 ft. Width: 11 m. Muck bottom - heavy vegetation (dead straw).				
5 April 1975					
Comments:	Slow flowing. Muddy water. Thin ice on edges.				
19 April 1975					
Comments:	Levels dropped from 4' to 1" with herbaceous mud flats (mud 1 - 1/2 ft. deep.) Water: very turbid. Width: 3 - 1 meters.				
19 May 1975					
Comments:	Width: 1 - 4 m. Depth: 10" (and 10" mud). In one seining - some fry and one carp. Flowing murky hot slow H_2O				
17 June 1975					
Comments:	Area too high due to rain over last 3 days before trip.				
25 June 1975.					
Comments:	Water too high to seine. No flow.				
11 July 1975	9			5	1.523
Comments:	Seined once. Width: 3 m. Depth: 3-4 ft. Water: turbid, scummy, very little flow.				
25 July 1975					
Comments:	Water level too high to be effectively seined by only 2 people.				
12 August 1975	17			9	1.869
Comments:	(at 23) Water level low. Depth: 16" max (4-16" range). Width 1/2 - 8 m. Bottom: sand. Dead fish on the numerous sand bars. Sweep (75m) was mostly a pool area between two sand bars.				

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
12 August 1975	10			7	1.748

Comments: (at 24). Depth: 30" max (range 8" - 30"). Width: constant 8 m. Bottom: rock & sand. Scum floating on top. Backwatering starts ≈ 200 meters below bridge.

20 September 1976
Comments: Water down. Very mucky mud flats.

10 October 1975
Comments: Much settled in. Water level is low. Small fish fry sighted.

15 November 1975
Comments: Bottom: sand & silt. Ice 1/4" thick. Sheets 2'4' wide. along edges. Temp. 3°C. Water: cloudy. Small amount of dying cladophora. Few fish seen - no schools in 100 m. area. 1.5 meters wide.

23 January 1976
Comments: Frozen. Snow covered.

20 February 1976
Comments: Photo taken. 20-30 ft. deep.

BLACK CREEK FISH SUMMARY SHEET

Station 26
Black Creek below Darling Road

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
20 February 1976	145(marked)			8	
	261(total)			8	
Comments:	Riffle area 9PP. Marked. Photo taken. Heavy rain next day Up 1.5 m.				
8-9 April 1976					
Comments:	Water temp. 20°C. Air temp. 12°C. Water: clear. Bottom: sand. Width: 1/4 - 1-1/2 mm. Depth 2" - 12". Much algae growth. Water level lower than last year. Redds cover wide sandy stretches of ditch (photo).				
13 May 1976	81			6	
Comments:	Algae choked entire stream width & all the way to the bottom. Biomass sample taken 100 m above station. 10°F. difference between top (warmer) and bottom. Fish found under algae.				
9 June 1976	9			3	
Comments:	Dip netted. Heavy algal growth.				
9 July 1976	13			5	
Comments:	Algae is somewhat washed out. Very few fish. Depth: 8-12". riffle somewhat deeper. Water: clear. Bottom: sand & silt.				
3 August 1976	7			1	
Comments:	Station is very shallow (2 - 4") and very heavily choked with algae. Extensively dip netted fish caught in riffle. Water: clear. Bottom: sandy decaying organic matter.				

BLACK CREEK FISH SUMMARY SHEET

Station 28
Black Creek below Wertz Drain

Date	Number of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
22 April 1976	526			9	
Comments:	Tons of moss-like chlodophora attached to rocks. Water: clear - level lower than normal. Max depth 10". Width: 1-2 m. 1" - 10" depth. Bottom: clay & gravel. 2 seine hauls. 11 crayfish.				
22 May 1976	35			7	
Comments:	Channel open in middle. Bottom & water are clean. Large quantities of chlodophora along banks. Dip netted. No other species sighted. Fish more numerous here than upstream.				
24 June 1976	785	1235	1.48	14	
Comments:	Much algae. Seined 2 times in 2 sections. Riffle seined separately. Rattail maggots abundant in rotting masses of algae. Bottom: sandy & clay. Fish relatively abundant. Large dytisidae beetle collected. Lots of small darters.				
21 July 1976	296	651.6g	2.20		
Comments:	Water clear. Not much algae. Bottom: decaying algae & sand. Average depth 8". D. Dudley had seen many fish in pools before rain had come the days before we came to samples. They must have dispersed when the water level rose.				
7 October 1976	3035	6907.0	2.3	14	1.649
4 November 1976	134	370.4	2.8	8	1.700
17 March 1977	64			9	1.605
31 March 1977	146			11	1.788
9 May 1977	305			12	1.762

BLACK CREEK FISH SUMMARY SHEET

Station 29
Black Creek below Smith Fry Drain.

Date	Numbers of Individuals	Total Weight	Weight per Individual	Number of Species	Species Diversity
11 March 1976	2363			10	1.176
Comments:	Upper pool 5 hauls. Lower pool 4 hauls. Width: 5 m. Turbulent weather.				
8-9 April 1976	3866			10	0.9740
Comments:	4 seine hauls. Water: clear. Bottom: sandy. Depth: 3" - 2' Many small Eb's not capturable caught 80% of all fish.				
13 May 1976	349			10	
Comments:	3 seine hauls. Pool is shallower. Many small fish sighted Too small to catch. Few large fish were seen or caught. Depth: 36" max.				
9 June 1976					
Comments:	Counted as part of Station 15 for June 9, 1976.				
9 July 1976	1151			13	
Comments:	Water clear & channel clear of algae. More than 95% of fish were in the pool formed by the entry of the Smith Fry. Bottom: sand & clay. ≈ 70% of the fish died due to being caught in the net.				
3 August 1976.					
Comments:	4" - 18" deep. Water slightly turbid. Decaying algae, sand & silt. Bottom: much algae washed down.				
9 September 1976	566	1251.8g	2.1g	15	2.0167
4 November 1976	361	464.0	1.5	12	2.300
31 March 1977	143			13	1.773
21 April 1977	146	430.3	2.9	10	1.869
10 May 1977	793			14	1.801
8 November 1977	5	112.5	22.5	1	

INSECT DATA

Early in the Black Creek project a comparison was made of the macroinvertebrate faunal in Black Creek and the Maumee River. What follows is a listing what was found.

Black Creek Drainage Area Aquatic Macroinvertebrate

Faunal List and Station Distribution of Species

Reproduced from best available copy.

Insecta

Ephemeroptera

Caenidae

Caenis simulans (3,4,12,15)
Caenis sp.A (3,24)

Baetidae

Callibaetis fluctuans (2,5,6,18,19,24)
Baetis intercalaris group (12,15)
Neocloeon alamance (3,15,17,19)

Tricorythidae

Tricorythodes sp.A (12)

Heptageniidae

Stenonema integrum (12)
Stenonema terminatum (12)
Stenonema nepotellum (12)
Stenonema sp.A (12)
Stenacron interpunctatum (2,12,15,19)
Heptagenia maculipennis (12)

Polymitarcidae

Ephoron album (12)

Odonata

Gomphidae

Dromogomphus sp.A (3,12,15)

Aeshnidae

Boyeria vinosa (12,15)

Libellulidae

Libellula sp.A (15)

Calopterygidae

Calopteryx maculatum (2,15,20)

Coenagrionidae

Argia moesta (12)
Enallagma sp.A (3)
Ischnura verticalis (3,12,15,20)

Plecoptera

Perlidae

Perlesta sp.A (2,19)

Hemiptera

Gerridae

Gerris remigis (9,19,24)

Veliidae

Rhagovelia obesa (12,17)

Corixidae

sp.A (2,3,4,5,9,15,24)
sp.B (2,9,19,20,24)

Megaloptera

Sialidae

Sialis sp.A (12)

Trichoptera

Hydropsychidae

Hydropsyche sp.A (12,15)
Cheumatopsyche sp.A (2,12,17,19,24)

Phryganeidae

Ptilostomis sp.A (15)

Limnophilidae

sp.A (24)

Coleoptera

Elmidae

Stenelmis sexlineata (12,24)
Dubiraphia bivattata (12,15)

Dryopidae

Helichus fastigiatus (12)

Haliplidae

Peltodytes duodecimpunctatus (3,9,12,15,18,24)

Dytiscidae

Agabus sp.A (2,3)
Laccophilus fasciatus (2,5,6)
Laccophilus sp.A (3,5)
Hydroporus wickhami (4)
Hydroporus griseostriatus (12)
Hygrotus sayi (5,20)

Hydrophilidae

Tropisternus lateralis (4,5,15,20)
Tropisternus mixtus (17,19)
Enochrus perplexus (20)
Enochrus nebulosus (4,6,24)
Berosus pereginus (2,4,6,12,15,17,24)
Laccobius sp.A (2,17,18,19,20,24)
Paracymus subcupreus (12)

Diptera

Tipulidae

Tipula sp.A (12)

Tabanidae

Chrysops sp.A (12)

Culicidae

Anopheles quadrimaculata (3)

Simuliidae

Simulium sp.A (3,12,17)

Stratiomyidae

Stratomyia sp.A (12,17,19)
Eupharyphus sp.A (12)

Ephidridae

sp.A (3)

Ceratapogonidae

Palpomyia sp.A (12,15)

Chironomidae

sp.A (2,3,4,5,6,12,15,20,24)
sp.B (2,12,15,19,24)
sp.C (12,15,19,20)
sp.D (12,15)
sp.E (12)
sp.F (3,12,15,20)
sp.G (12)
sp.H (12)
sp.I (15)
sp.J (12,15)

Crustacea

Isopoda

Lirceus sp.A (2,12,15,17,19,24)

Amphipoda

Hyalella azteca (2,12,15,24)

Decapoda

Orconectes rusticus mirus (2,5,12,15,19,24)

Macroinvertebrate Species taken at Black Creek
Sampling Station 2

- Insecta
    - Ephemeroptera
        - Baetidae
            - *Callibaetis fluctuans*
        - Heptageniidae
            - *Stenacron interpunctatum*
    - Odonata
        - Calopterygidae
            - *Calopteryx maculatum*
    - Plecoptera
        - Perlidae
            - *Perlesta* sp.
    - Hemiptera
        - Corixidae sp.A
        - Corixidae sp.B
    - Trichoptera
        - Hydropsychidae
            - *Cheumatopsyche* sp.A
    - Coleoptera
        - Dytiscidae
            - *Agabus* sp.
            - *Laccophilus fasciatus*
        - Hydrophilidae
            - *Berosus peregrinus*
            - *Laccobius* sp.A
        - Diptera
            - Chironomidae sp.A
            - Chironomidae sp.B
- Crustacea
    - Isopoda
        - Asellidae
            - *Lirceus* sp.A
    - Amphipoda
            - *Hyallela azteca*
    - Decapoda
            - *Orconectes rusticus mirus*

Macroinvertebrate Species Taken at Black Creek
Sampling Station 3

- Insecta
  - Ephemeroptera
    - Baetidae
      - *Neocloeon alamance*
    - Caenidae
      - *Caenis simulans*
      - *Caenis* sp.A
  - Odonata
    - Gomphidae
      - *Dromogomphus* sp.A
    - Coenagrionidae
      - *Enallagma* sp.A
      - *Ischnura verticalis*
  - Hemiptera
    - Corixidae
      - sp.A
  - Coleoptera
    - Haliplidae
      - *Peltodytes duodecimpunctatus*
    - Dytiscidae
      - *Agabus* sp.A
      - *Laccophilus* sp.A
  - Diptera
    - Simuliidae
      - *Simulium* sp.
    - Chironomidae
      - sp.A
      - sp.F
    - Culicildae
      - *Anopheles quadrimaculata*
    - Ephidridae
      - sp.A

Macroinvertebrate Species Taken at Black Creek Sampling Station 4

Insecta
    Ephemeroptera
        Caenidae
            Caenis simulans
    Hemiptera
        Corixidae sp.A
    Coleoptera
        Hydrophilidae
            Enochrus nebulosus
            Berosus peregrinus
            Tropisternus lateralis
        Dyticidae
            Hydroporus wickhami
    Diptera
        Chironomidae sp.A

Macroinvertebrate Species Taken at Black Creek
Sampling Station 5

- Insecta
  - Ephemeroptera
    - *Callibaetis fluctuans*
  - Hemiptera
    - Corixidae sp.A
  - Coleoptera
    - Hydrophilidae
      - *Tropisternus lateralis*
    - Dytiscidae
      - *Hygrotus sayi*
      - *Laccophilus fasciatus*
      - *Laccophilus* sp.A
  - Diptera
    - Chironomidae sp.A
- Crustacea
  - Decapoda
    - *Orconectes rusticus mirus*

Macroinvertebrate Species Taken at Black Creek
Sampling Station 6

Insecta

Ephemeroptera

Baetidae

Callibaetis fluctuans

Coleoptera

Hydrophilidae

Enochrus nebulosus
Berosus peregrinus
Laccobius sp.A
Helophorus sp.A

Dytiscidae

Laccophilus fasciatus

Diptera

Chironomidae sp.A

Macroinvertebrate Species Taken at Black Creek
Sampling Station 9

Hemiptera

Corixidae

sp.A
sp.B

Gerridae

Gerris remigis

Coleoptera

Haliplidae

Peltodytes duodecimpuncta

Macroinvertebrate Species Taken at Black Creek
Sampling Station 12

Insecta

- Ephemeroptera
  - Caenidae
    - *Caenis simulans*
  - Tricorythidae
    - *Tricorythodes* sp.A
  - Baetidae
    - *Baetis intercalaris* group
  - Heptageniidae
    - *Stenonema integrum*
    - *Stenonema terminatum*
    - *Stenonema nepotellum*
    - *Stenonema* sp.A
    - *Stenacron interpunctatum*
    - *Heptagenia maculipennis*
  - Polymitarcidae
    - *Ephoron album*
- Odonata
  - Gomphidae
    - *Dromogomphus* sp.A
  - Aeshnidae
    - *Boyeria vinosa*
  - Coenagrionidae
    - *Argia moesta*
    - *Ischnura verticalis*
- Hemiptera
  - Veliidae
    - *Rhagovelia obesa*
- Trichoptera
  - Hydropsychidae
    - *Hydropsyche* sp.A
    - *Cheumatopsyche* sp.A
- Megaloptera
  - Sialidae
    - *Sialis* sp.A

- Coleoptera
    - Elmidae
        - *Stenelmis sexlineata*
        - *Dubiraphia bivittata*
    - Dryopidae
        - *Helichus fastigiatus*
    - Hydrophilidae
        - *Paracymus subcupreus*
        - *Berosus peregrinus*
    - Haliplidae
        - *Peltodytes duodecimpunctata*
    - Dytiscidae
        - *Hydroporus griseostriatus*
- Diptera
    - Chironomidae
        - sp.A
        - sp.B
        - sp.C
        - sp.D
        - sp.E
        - sp.F
        - sp.G
        - sp.H
        - sp.J
    - Stratiomyidae
        - *Eupharyphus* sp.A
        - *Stratiomyia* sp.A
    - Ceratapogonidae
        - *Palpomyia* sp.A
    - Tabanidae
        - *Chrysops* sp.A
    - Tipulidae
        - *Tipula* sp.A
    - Simuliidae
        - *Simulium* sp.A
- Crustacea
    - Isopoda
        - *Lirceus* sp.A
    - Amphipoda
        - *Hyallela azteca*
    - Decapoda
        - *Orconectes rusticus mirus*

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Macroinvertebrate Species Taken at Black Creek
Sampling Station 15

Insecta
- Ephemeroptera
  - Baetidae
    - _Baetis intercalaris_ group
    - _Neocloeon alamance_
  - Caenidae
    - _Caenis simulans_
  - Heptageniidae
    - _Stenacron interpunctatum_
- Odonata
  - Gomphidae
    - _Dromogomphus_ sp.A
  - Aeshnidae
    - _Boyeria vinosa_
  - Libellulidae
    - _Libellula_ sp.A
  - Calopterygidae
    - _Calopteryx maculatum_
  - Coenagrionidae
    - _Ischnura verticalis_
- Hemiptera
  - Corixidae sp.A
- Trichoptera
  - Hydropsychidae
    - _Hydropsyche_ sp.A
  - Phryganeidae
    - _Ptilostomis_ sp.A
- Coleoptera
  - Elmidae
    - _Dubiraphia bivittata_
  - Haliplidae
    - _Peltodytes duodecempuncta_
  - Hydrophilidae
    - _Berosus peregrinus_
    - _Tropisternus lateralis_

Diptera

- Chironomidae
  - sp.A
  - sp.B
  - sp.C
  - sp.D
  - sp.F
  - sp.I
  - sp.J
- Ceratopogonidae
  - *Palpomyia* sp.A

Crustacea

- Isopoda
  - *Lirceus* sp.A
- Amphipoda
  - *Hyallela azteca*
- Decapoda
  - *Orconectes rusticus mirus*

Macroinvertebrate Species Taken at Black Creek
Sampling Station 17

Insecta
    Ephemeroptera
        Baetidae
            Neocloeon _alamance_
    Hemiptera
        Veliidae
            Rhagovelia _obesa_
    Trichoptera
        Hydropsychidae
            Cheumatopsyche sp.A
    Coleoptera
        Hydrophilidae
            Tropisternus _mixtus_
            Berosus _peregrinus_
            Laccobius sp.A
    Diptera
        Stratiomyidae
            Stratomyia sp.A
        Simuliidae
            Simulium sp.
Crustacea
    Isopoda
        Lirceus sp.

Macroinvertebrate Species Taken at Black Creek
Sampling Station 18

Insecta
- Ephemeroptera
  - Baetidae
    - *Callibaetis fluctuans*
- Coleoptera
  - Haliplidae
    - *Peltodytes duodecempuncta*
  - Hydrophilidae
    - *Laccophilus* sp.①
  - Dytiscidae
    - 1 - unident. larvae

Macroinvertebrate Species Taken at Black Creek
Sampling Station 19

Insecta

Ephemeroptera

Heptageniidae

Stenacron interpunctatum

Baetidae

Neocloeon alamance
Callibaetis fluctuans

Hemiptera

Corixidae sp.Ⓑ

Gerridae

Gerris remigis

Plecoptera

Perlidae

Perlesta sp.A

Trichoptera

Hydropsychidae

Cheumatopsyche sp.A

Coleoptera

Hydrophilidae

Laccobius sp.A
Tropisternus mixtus

Diptera

Chironomidae

sp.B
sp.C

Stratiomyidae

Stratomyia sp.A

Crustacea

Isopoda

Lirceus sp.A

Decapoda

Orconectes rusticus mirus

Mollusca

Gastropoda

1 - unident. snail

Macroinvertebrate Species Taken at Black Creek
Sampling Station 24

- Insecta
    - Ephemeroptera
        - Caenidae
            - *Caenis* sp.A
        - Baetidae
            - *Callibaetis fluctuans*
    - Hemiptera
        - Gerridae
            - *Gerris remigis*
        - Corixidae
            - sp.A
            - sp.B
    - Trichoptera
        - Hydropsychidae
            - *Cheumatopsyche* sp.A
        - Limnophilidae sp.A (case only)
    - Coleoptera
        - Haliplidae
            - *Peltodytes duodecimpunctata*
        - Elmidae
            - *Stenelmis sexlineata*
        - Hydophilidae
            - *Berosus peregrinus*
            - *Laccobius* sp.A
            - *Enochrus nebulosus*
    - Diptera
        - Chironomidae
            - sp.Ⓐ
            - sp.Ⓑ
- Crustacea
    - Amphipoda
        - *Hyalella azteca*
    - Isopoda
        - *Lirceus* sp.A
    - Decapoda
        - *Orconectes rusticus mirus*

Macroinvertebrate Species Taken at Black Creek Sampling Station at Wertz Woods (WW)

Insecta
    Odonata
        Calopterygidae
            Calopteryx maculatum
        Coenagrionidae
            Ischnura verticalis
    Hemiptera
        Corixidae sp.B
    Diptera
        Chironomidae
            sp.Ⓐ
            sp.Ⓒ
            sp.F
    Coleoptera
        Hydrophilidae
            Tropisternus lateralis
            Helophorus sp.A
            Enochrus perplexus
        Dytiscidae
            Hygrotus sayi

Control Drainage Area Aquatic Macroinvertebrate Faunal List and Station Distribution

---

- Insecta
  - Ephemeroptera
    - Caenidae
      - *Caenis simulans* (13,21)
    - Heptageniidae
      - *Stenacron interpuctatum* (13,21,21')
      - *Stenonema integrum* (21,21')
      - *Stenonema terminatum* (21')
      - *Heptagenia diabasia* (21)
      - *Heptagenia macuiipennis* (21')
    - Ephemeridae
      - *Hexagenia* sp.A (13,21)
    - Tricorythidae
      - *Tricorythodes* sp.A (21)
    - Polymitarcidae
      - *Ephoron album* (21')
    - Potamanthidae
      - *Potamanthus myops* (21')
  - Odonata
    - Calopterygidae
      - *Hetaerina americana* (21')
      - *Calopteryx maculatum* (21)
    - Coenagrionidae
      - *Argia apicalis* (21')
    - Aeshnidae
      - *Boyeria vinosa* (21)
    - Gomphidae
      - *Dromogomphus* sp.A (21)
  - Plecoptera
    - Perlidae
      - *Perlesta* sp.A (21,21')
  - Trichoptera
    - Hydropsychidae
      - *Cheumatopsyche* sp.A (13,21,21')
      - *Hydropsyche* sp.A (21,21')
      - *Hydropsyche* sp.B (21')

- Coleoptera
    - Elmidae
        - *Stenelmis sexlineata* (21')
    - Hydrophilidae
        - *Tropisternus lateralis* (21,21')
        - *Helophorus* sp.A (21)
        - *Berosus* sp. (larvae) (13)
- Diptera
    - Chironomidae
        - sp.A (21)
        - sp.B (21)
        - sp.C (13)
        - sp.G (13)
    - Ephidridae
        - sp.B (13)
    - Tabanidae
        - *Chrysops* sp.A (13)
- Hemiptera
    - Corixidae
        - sp.A (21)
        - sp.B (13, 21)
        - sp.C (13)
    - Gerridae
        - *Gerris remigis* (21)
- Crustacea
    - Isopoda
        - *Lirceus* sp.A (13,21)
    - Amphipoda
        - *Hyalella azteca* (21)
    - Decapoda
        - *Orconectes rusticus mirus* (21,21')

Macroinvertebrate Species Taken at Control Area
Sampling Station 13

- Insecta
  - Ephemeroptera
    - Caenidae
      - *Caenis simulans*
    - Heptageniidae
      - *Stenacron interpunctatum*
    - Ephemeridae
      - *Hexagenia* sp.A
  - Hemiptera
    - Corixidae
      - sp.B
      - sp.C
  - Coleoptera
    - Hydrophilidae
      - *Berosus* sp. (larvae)
  - Trichoptera
    - Hydropsychidae
      - *Cheumatopsyche* sp.A
  - Diptera
    - Chironomidae
      - sp.C
      - sp.G
    - Ephidridae sp.B
    - Tabanidae
      - *Chrysops* sp.A
- Crustacea
  - Isopoda
    - *Lirceus* sp.

Macroinvertebrate Species Taken at Control Area
Sampling Station 21

- Insecta
  - Ephemeroptera
    - Caenidae
      - *Caenis simulans*
    - Tricorythidae
      - *Tricorythodes* sp.A
    - Heptageniidae
      - *Stenonema integrum*
      - *Stenacron interpunctatum*
      - *Heptagenia diabasia*
    - Ephemeridae
      - *Hexagenia* sp.A
  - Odonata
    - Aeshnidae
      - *Boyeria vinosa*
    - Gomphidae
      - *Dromogomphus* sp.A
    - Calopterygidae
      - *Calopteryx Maculatum*
  - Plecoptera
    - Perlidae
      - *Perlesta* sp.A
  - Hemiptera
    - Gerridae
      - *Gerris remigis*
    - Corixidae
      - sp.A
      - sp.B
  - Trichoptera
    - Hydropsychidae
      - *Hydropsyche* sp.A
      - *Cheumatopsyche* sp.A
  - Coleoptera
    - Hydrophilidae
      - *Helophorus* sp.A
      - *Tropisternus lateralis*

Diptera

Chironomidae

sp.A
sp.B

Crustacea

Isopoda

Lirceus sp.A

Amphipoda

Hyalella azteca

Decapoda

Orconectes rusticus mirus

Macroinvertebrate Species Taken at Control Area
Sampling Station 21'

Insecta
    Ephemeroptera
        Polymitarcidae
            Ephoron album
        Potamanthidae
            Potamanthus myops
        Heptageniidae
            Stenonema integrum
            Stenonema terminatum
            Stenacron interpunctatum
            Heptagenia maculipennis
    Odonata
        Calopterygidae
            Hetaerina americana
        Coenagrionidae
            Argia apicalis
    Plecoptera
        Perlidae
            Perlesta sp.
    Trichoptera
        Hydropsychidae
            Cheumatopsyche sp.
            Hydropsyche sp.A
            Hydropsyche sp.B
    Coleoptera
        Elmidae
            Stenelmis sexlineata
        Hydrophilidae
            Tropisternus lateralis
Crustacea
    Decapoda
        Orconectes rusticus mirus

Maumee River Aquatic Macroinvertebrate Faunal List
(Stations 14 and 26 combined)

- Insecta
  - Ephemeroptera
    - Caenidae
      - *Caenis simulans*
    - Baetidae
      - *Baetis intercalaris* group
      - *Baetis* sp.A
      - *Baetis* sp.B
      - *Pseudocloeon* sp.A
    - Tricorythidae
      - *Tricorythodes* sp.A
    - Heptageniidae
      - *Stenonema integrum*
      - *Stenonema terminatum*
      - *Stenonema* sp.A
      - *Stenonema* sp.B
      - *Stenacron interpunctatum*
      - *Heptagenia maculipennis*
    - Potamanthidae
      - *Potamanthus myops*
  - Odonata
    - Calopterygidae
      - *Calopteryx maculatum* (adults only)
    - Coenagrionidae
      - *Argia moesta*
      - *Argia apicalis*
      - *Argia sedula*
      - *Argia fumipennis violacia*
      - *Ischnura verticalis*
      - *Ischnura posita* (adults only)
  - Plecoptera
    - Perlidae
      - *Perlesta* sp.A
    - Taeniopterygidae
      - *Taeniopteryx burksi*

Coleoptera

Elmidae

Stenelmis sexlineata
Ancyronyx variegatus

Trichoptera

Hydropsychidae

Hydropsyche sp.A
Hydropsyche sp.B
Hydropsyche sp.C
Cheumatopsyche sp.A

Diptera

Simuliidae

Simulium sp.A

Empididae

sp.A

Chironomidae

sp.A
sp.B
sp.C
sp.D
sp.E

Crustacea

Isopoda

Lirceus sp.A

Amphipoda

Hyallela azteca

Decapoda

Orconectes rusticus mirus
Orconectes sp.A

Mutual Association of Areas Based on Aquatic Macroinvertebrate Sampling

Area (#spp.)	Area (#spp.)	#spp. common	%MA
Control, Benthos only (28)	Maumee River (39)	20	59.70
Black Creek, Benthos only (49)	Maumee River (39)	24	54.54
Control Area (36)	Black Creek (68)	26	50.00
Black Creek 12 & 15 (50)	Black Creek - 12 & 15 (40)	22	48.89
Control Area (36)	Black Creek - 12 & 15 (40)	17	45.33
Black Creek - 12 & 15 (40)	Maumee River (39)	13	32.91
Black Creek 12 & 15 (50)	Maumee River (39)	13	29.21

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Species Diversity Data Based on Artificial Substrate Sample from Black Creek Station 12, September, 1974

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.A	8
sp.C	1
sp.D	116
Ephemeroptera	
Heptageniidae	
Stenacron interpunctatum	4
Caenidae	
Caenis simulans	12
Odonata	
Coenagrionidae	
Ischnura verticalis	3
Gomphidae	
Dromogomphus sp.	1
Coleoptera	
Elmidae	
Dubiraphia bivittata	10
Hydrophilidae	
Berosus peregrinus	5
Crustacea	
Amphipoda	
Hyallela azteca	1
	165

$\bar{d} = 1.82$

Species Diversity Data Based on Artificial Substrate
Sample from Black Creek; Station 12, October, 1974

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.C	3
sp.J	44
Ephemeroptera	
Heptageniidae	
Stenacron interpunctatum	4
Caenidae	
Caenis simulans	96
Tricorythidae	
Tricorythodes sp.	1
Odonata	
Coenagrionidae	
Ischnura verticalis	12
Gomphidae	
Dromogomphus sp.	1
Coleoptera	
Elmidae	
Dubiraphia bivattata	300
Hydrophilidae	
Berosus peregrinus	2
Megaloptera	
Sialidae	
Sialis sp.A	1
Crustacea	
Isopoda	
Lirceus sp.A	4
Amphipoda	
Hyallela azteca	2
Decapoda	
Orconectes rusticus mirus	2
	474

$\bar{d} = 1.70$

Species Diversity Data Based on Artificial Substrate
Sample from Black Creek, Station 12, May, 1975

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.B	8
sp.D	16
sp.F	1
Stratiomyidae	
Eupharyphus sp.A	1
Stratiomyia sp.A	1
Ceratapogonidae	
Palpomyia sp.A	2
Tabanidae	
Chrysops sp.A	1
Megaloptera	
Sialidae	
Sialis sp.A	1
Odonata	
Coenagrionidae	
Ischnura verticalis	1
Coleoptera	
Elmidae	
Dubiraphia bivittata	60
Hydrophilidae	
Berosus peregrinus	6
Crustacea	
Isopoda	
Lirceus sp.A	5
Decapoda	
Orconectes rusticus mirus	1
	115

Species Diversity Data Based on Artificial Substrate Sample from Black Creek, Station 12, June, 1975

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.C	24
sp.D	41
sp.J	12
Ceratapogonidae	
Palpomyia sp.	1
Ephemeroptera	
Caenidae	
Caenis simulans	23
Odonata	
Coenagrionidae	
Argia moesta	1
Coleoptera	
Elmidae	
Dubiraphia bivittata	7
Crustacea	
Isopoda	
Lirceus sp.A	18
Decapoda	
Orconectes rusticus mirus	3
	132

$\bar{d} = 2.68$

Species Diversity Data Based on Artificial Substrate
Sample (1) from Black Creek, Station 12, August, 1975

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.A	34
sp.B	17
sp.H	2
Ceratopogonidae	
Palpomyia sp.	3
Ephemeroptera	
Heptageniidae	
Stenacron interpunctatum	8
Caenidae	
Caenis simulans	2
Trichoptera	
Hydropsychiidae	
Hydropsyche sp.A	12
Coleoptera	
Hydrophilidae	
Berosus peregrinus	3
Elmidae	
Dubiraphia bivittata	6
Crustacea	
Amphipoda	
Hyallela azteca	2
	96

$\bar{d} = 2.74$

Species Diversity Data Based on Artificial Substrate Sample (2) from Black Creek, Station 12, August, 1975

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.B	30
sp.D	17
sp.E	41
Ceratopogonidae	
Palpomyia sp.	1
Ephemeroptera	
Heptageniidae	
Stenacron interpunctatum	8
Coleoptera	
Elmidae	
Dubiraphia bivittata	9
Haliplidae	
Peltodytes duodecimpunctata	2
Trichoptera	
Hydropsychiidae	
Hydropsyche sp.A	1
Crustacea	
Amphipoda	
Hyallela azteca	1
	110

$\bar{d} = 2.44$

Species Diversity Data Based on Artificial Substrate
Sample, Black Creek, Station 12, October, 1975.

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.A	3
sp.G	4
Coleoptera	
Elmidae	
Dubiraphia bivittata	15
Hydrophilidae	
Berosus peregrinus	11
Crustacea	
Isopoda	
Lirceus sp.A	2
	39

$\bar{d} = 1.62$

Species Diversity Based on Artificial Substrate
Sample from Black Creek, Station 15, November, 1974

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.D	22
sp.J	3
Ephemeroptera	
Heptageniidae	
Stenacron interpunctatum	2
Caenidae	
Caenis simulans	15
Baetidae	
Baetis intercalaris group	1
Odonata	
Coenagrionidae	
Ischnura verticalis	1
Calopterygidae	
Calopteryx maculatum	2
Aeshnidae	
Boyeria vinosa	1
Coleoptera	
Elmidae	
Dubiraphia bivattata	20
Crustacea	
Amphipoda	
Hyallela azteca	26
	95

$\bar{d} = 2.58$

Species Diversity Data Based on Artificial Substrate
Sample, Black Creek, Station 12, November 1975.

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.A	10
sp.B	44
Coleoptera	
Hydrophilidae	
Berosus peregrinus	1
Crustacea	
Isopoda	
Lirceus sp.A	1
Decopoda	
Orconectes rusticus mirus	1
	57

$\bar{d} = 1.04$

Species Diversity Data Based on Artificial Substrate Sample from Black Creek, Station 15, September, 1975

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.A	6
sp.B	36
sp.C	3
Ceratopogonidae	
Palpomyia sp.	1
Ephemeroptera	
Heptageniidae	
Stenacron interpunctatum	3
Coleoptera	
Elmidae	
Dubiraphia bivittata	14
Hydrophilidae	
Berosus peregrinus	5
Trichoptera	
Hydropsychidae	
Hydropsyche sp.A	5
Crustacea	
Isopoda	
Lirceus sp.	9
Decopoda	
Orconectes rusticus mirus	5
	88

$\bar{d} = 2.75$

Species Diversity Data Based on Artificial Substrate Sample from Black Creek, Station 15, November, 1975

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.A	6
sp.D	5
sp.F	1
Ephemeroptera	
Heptageniidae	
Stenacron interpunctatum	6
Odonata	
Coenagrionidae	
Ischnura verticalis	6
Calopterygidae	
Calopteryx maculatum	2
Crustacea	
Isopoda	
Lirceus sp.	8
Decopoda	
Orconectes rusticus mirus	1
	38

$\bar{d} = 2.74$

Species Diversity Data Based on Artificial Substrate
Sample from Black Creek, Station 15, December, 1975

Taxa	# Individuals
Insecta	
Diptera	
Chironomidae	
sp.A	8
sp.B	86
sp.I	1
sp.J	2
Odonata	
Libellulidae	
Libellula sp.A	1
Coneagrionidae	
Ischnura verticalis	1
Trichoptera	
Hydropsychidae	
Hydropsyche sp.A	3
Phryganeidae	
Ptilostomis sp.A	3
Crustacea	
Amphipoda	
Hyallela azteca	3
Isopoda	
Lirceus sp.	46
Decopoda	
Orconectes rusticus mirus	5
	159

$\bar{d} = 1.92$

Summary of Species Diversity Data Based on Artifical Substrate Samples from the Maumee River

Station & Date	# Species	# Individuals	$\bar{d}$
26A - 10 - 74	12	152	1.78
26B - 10 - 74	12	130	2.64
26A - 11 - 74	5	30	1.98
26B - 11 - 74	13	140	2.19
26A - 12 - 74	5	22	2.02
26B - 12 - 74	6	872	3.53
26A - 9 - 75	8	174	1.67
26B - 9 - 75	10	329	1.93
26 - 10 - 75	10	116	2.78
26 - 11 - 75	11	61	2.71
14A - 9 - 74	5	30	1.98
14B - 9 - 74	3	21	1.34
14A - 10 - 74	6	33	1.86
14B - 10 - 74	9	45	2.28
14A - 11 - 74	5	16	1.79
14B - 11 - 74	7	33	1.76
14A - 12 - 74	7	37	1.98
14B - 12 - 74	8	29	2.12
14 - 8 - 75	11	97	2.32
14 - 10 - 75	12	67	3.15
14 - 11 - 75	7	21	2.36

Comparison of Artifical Substrate Samples in Black Creek and Maumee River

	Black Creek		Maumee River	
Station	12	15	26	14
Avg. #species per sample	12	10	9	7
# species (total)	30	31	32	32
Avg. #ind/sample	117	95	149	39
Avg. $\bar{d}$	2.0	2.5	2.30	2.12
range $\bar{d}$	1.04-2.74	1.92-2.58	1.42-3.53	1.34-2.28

SOCIO ECONOMIC DATA

Socio economic data included in this volume are the following:

1. Survey instruments
2. Description of variables
3. Statisitcal summary of variables

Complete data files are available in machine readable form at cost of duplication. For additional information contact:

Department of Agricultural Economics
Purdue University
West Lafayette, IN 47907

Behavioral Components of
Sediment Control in the
Black Creek Basin

Socio-Economic Phase
Purdue University
Department of
Agricultural Economics

February, 1974

Schedule Number ____________

Township ____________

Section Number ____________

Lot Number ____________

Interviewers Name:

____

Date of Interview Completion:

____

Land Recorded in Name of ____________

____

____

INTRODUCTION:

HELLO! My name is ____________. I am working with Purdue University and local organizations on an environmental project in Allen County. We are interviewing land users concerning their opinions of pollution control and land practices. You are one of the households selected in this area. All the information you give in this interview will be treated as STRICTLY CONFIDENTIAL and will never be identified with you personally.
(Note: The name is the land owner and this individual may be a renter, in which case he should be interviewed). The interview will take about 30 minutes.

	DATE	TIME	RESULTS AND SUGGESTIONS
FIRST CALL			
SECOND CALL			
THIRD CALL			

I. General Information

First, I would like to ask you about your farmland.

1. How many acres (approximately within these boundaries) do you (show map):

a. Own personally ____________________

b. Own in part ______________________

c. Rent from someone _________________

d. Other (specify ______

__________________) _____________

Total Acres _____________

2. Of the total acres you personally farm, how many are in each of the following categories:

a. Acres in crops __________

b. Acres in woodland _______

c. Acres in pasture ________

d. Acres in wild-life and recreation _____________

e. Acres in other (buildings, roads, lanes, etc.) ______

3. How many acres do you rent out?______________

4. On CARD 1 is a list of crops. For the number of acres (see 2a for total) you have in crops, how many of each crop do you farm and what was the most recent yield per acre?

CROPS	# of Acres Farmed	Yield Per Acre (1973)	Fertility of Soil (Fertilizer)				
			Manure Tons/Acre	Organic (Green Sand) Others	Chemical (Analysis) N P_2O_5 K_2O	lbs./ Acre	
Corn (for grain)		bu.					
Corn (for silage)		Tons					
Soybeans		bu.					
Oats		bu.					
Wheat		bu.					
Legume Hay		Tons					
Other (Pasture,etc.)							

5a. When do you apply your fertilizers?(Fall, Spring, after planting) _______

5b. Do you plow it down, disc it in or knife-in your nitrogen? ____________

6. Do you plan to plant the same crops and the same number of acres for this year? ______________

Soil Characteristics and Their Limitations

7. In thinking about the land you farm, consider the number of acres which cause you management problems or limits your total production because of one or more of three reasons:

1. Wetness   2. Erodibility   3. Drought

Wetness might mean late plowing, planting or harvesting may result in soil compaction, puddling and crusting of surfaces and over-all poor crop stands. It might also limit the crops or rotations you follow.

Erodibility might make it hard to prepare a seedbed in exposed subsoils and may result in washout of planted seed or in covering of low areas by silt from higher areas. It might also result in clogging of your open surfaces drains or in filling of your farm ponds.

Drought might be a limitation to you on soils of two kinds: (1) those which do not erode badly, but have low ability to store water for crops, or (2) sloping erodible soils where runoff is faster than water can be absorbed and there is lower water storage for use by crops. (In thinking of drought, you may have some overlapping with erodibility limitations.)

7a. For each of these three land limitations, how many acres do you have that are low, moderate or high in wetness? (RECORD NUMBER OF ACRES); low, moderate or high in erodibility? (RECORD NUMBER OF ACRES); low, moderate or high in drought? (RECORD NUMBER OF ACRES). For drought, how many acres are due to sandiness or slope runoff?

Severity of Limitation	Kind of Limitation			For Drought, how much is due to:	
	Wetness	Erodibility	Drought	Sandiness	Slope and Runoff
Low					
Moderate					
High					

7b. Where wetness is a problem, which of these possible reasons apply? (Circle all that apply.)

1. Inadequate surface drainage and outlets.
2. Extremely high clay and slopedrainage to tile.
3. Broken tile in system.
4. Inadequate tile system.
5. No tile system.
6. Other reasons (specify ______________________________)

8. How many of the following animals do you have?

a. Horses ______
b. Beef Cows ______
c. Calves ______
d. Milk Cows ______
e. Hogs ______
f. Sheep ______
g. Chickens ______

9. Have you ever voluntarily participated in a government feed grain program?

1. No
2. Yes
9. N/R

10. Do you have a creek, ditch or stream crossing the boundaries of your property?

Yes ______ No ______

11. Do you have a conservation plan with the Soil and Water Conservation District Office?

1. Yes
2. No (Go to 12)
3. D.K.

If yes, ask:

a. When was the plan drawn up? ______________________________

(TURN TO CARD 2)

b. Has the plan been followed? (check)

1. Yes, followed strictly
2. Yes, with some variation
3. Followed some, not followed some
4. Not followed very much
5. Not followed at all

(TURN TO CARD 3)

12. I will now read a list of activities you might encounter while working with your land. Where do you go, or who would you seek out for information when you have a problem with:

	Handle it myself	Friend or Neighbor	Small Business or Professional (Co-op, Vet.)	A local Government Agency (SCS,CES)
a. Crop disease	1	2	3	4
b. Insect control	1	2	3	4
c Machinery	1	2	3	4
d. Livestock	1	2	3	4
e. Crop rotation	1	2	3	4
f. Farm Management	1	2	3	4
g. Soil Management	1	2	3	4
h. Fertilizer usage	1	2	3	4
i. New crop varieties	1	2	3	4
j. Non farm land uses	1	2	3	4
k. Potential pollution	1	2	3	4

(TURN TO CARD 4)

13. How adequate do you think our present technical knowledge is about methods to control soil erosion and runoff?

1.	Completely inadequate even if all present knowledge were applied.	4.	Completely adequate to control pollution if all present knowledge were applied.
2.	Somewhat inadequate	8.	D.K.
3.	Somewhat adequate	9.	N/R

(CARD 5)

14. In your opinion, should there be public regulation of land use practices where erosion and other runoff or discharge problems affect the water supply, or should this be left up to individuals to control?

1.	Yes, there should be some public control	8.	D.K.
2.	No, it should be left to individual owner	9.	N/R

II Attitudes Toward Water and Soil Resource Development

15. Now, we would like to get your opinion to several statements and ask whether you agree or disagree with each. There are, of course, no "right" or "wrong" answers to these. (See CARD 5A)

	Agree	Don't Know	Dis-Agree
a. Conservation of soil is not a real problem in this area.	1	2	3
b. The average landowner in this county stands to lose more than he will gain by soil and water development programs.	1	2	3
c. Trees are of little value in keeping the soil from washing away.	1	2	3
d. The cost of soil erosion reducing practices should be borne entirely by those whose land is affected.	1	2	3
e. The future of this area's economy depends in large part part on the constructive use of its land resources.	1	2	3
f. The federal government should play an important role in soil conservation programs in this county.	1	2	3
g. Pollution of the streams is a major problem in this county.	1	2	3
h. State's powers are being given up when the federal government finances watershed projects.	1	2	3
i. Landowners have little opportunity to express their opinions in planning watershed projects.	1	2	3

For the next questions, please refer to CARD 6. I will read several statements. Please tell me whether you strongly disagree, disagree, agree, or strongly agree with each statement.

		S.D.	D.	N.	A.	S.A.
16a.	Consumers won't pay the higher costs necessary to allow farmers to eliminate agricultural pollution	5	4	3	2	1
16b.	Even considering the cost, all available pollution control techniques should be applied.	5	4	3	2	1
17.	It has been estimated that it will cost at least $42 billion to clean up water pollution in the U.S. Do you think there should be a special "environmental improvement" tax added to everyone's income tax which would be used to pay for pollution control programs?	5	4	3	2	1
18.	Federal taxation to clean up our water completely wouldn't be too expensive to consider.	5	4	3	2	1
19.	Drainage from septic tanks represents a major health hazard.	5	4	3	2	1
20.	Animal wastes are a major source of pollution.	5	4	3	2	1
21.	It is very important to clean up the environment.	5	4	3	2	1
22.	Sewage systems to clean up our nation's waters are too costly to be practical.	5	4	3	2	1
23.	Our society can easily adjust its spending to solve the problem of erosion and other runoff problems.	5	4	3	2	1

III Attitudes Toward Local Community and County

(TURN TO CARD 7)

24. Suppose a watershed protection district were declared for this area. Would you be in favor of specific standards for households, farms, municipalities and industries to control pollution?

1. Strongly favor
2. Favor
3. Neutral
4. Against
5. Strongly against
8. D.K.
9. N/R

(Turn to card 8)

25. Suppose it were found that a household were responsible for significant pollution in the Black Creek. What action should be, taken?

    1. No outside action should be taken.
    2. The polluter should be notified, but corrective action should be voluntary with government financial assistance available.
    3. The polluter should be notified, but corrective action should be voluntary and at his own expense.
    4. The polluter should be required by law to stop the pollution, but the government should provide financial assistance.
    5. The polluter should be required by law to stop the pollution at his own expense.
    8. D.K.
    9. N/R

26. If it were found that a farm operation were responsible for significant pollution to the Black Creek, what action should be taken? (card 8)

    1. No outside action should be taken.
    2. The polluter should be notified, but corrective action should be voluntary with government financial assistance available.
    3. The polluter should be notified, but corrective action should be voluntary at his own expense.
    4. The polluter should be required by law to stop the pollution, but the government should provide financial assistance.
    5. The polluter should be required by law to stop the pollution at his own expense.
    8. D.K.
    9. N/R

27. And if it were found that a business or industry were responsible for significant pollution to the Black Creek, what action should be taken? (card 8)

    1. No outside action should be taken.
    2. The polluter should be notified, but corrective action should be voluntary with government financial assistance available.
    3. The polluter should be notified, but corrective action should be voluntary at his own expense.
    4. The polluter should be required by law to stop pollution, but the government should provide financial assistance.
    5. The polluter should be required by law to stop pollution at his own expense.
    8. D.K.
    9. N/R

(Card 9)

29. **In each of these three situations, if correction were required, what would be a reasonable time to allow for the work to be completed? (Ask: For A. Households, then for B. Farm, then for C. Business)**

A Household	B Farm	C Business

1. **Immediately to 2 weeks**
2. **Up to 2 months**
3. **Six months**
4. **One year**
5. **Two years**
6. **Up to five years**
7. **Longer than five years**
8. **D.K.**
9. **N/R**

(TURN TO CARD 10)

29. **Who should pay for the efforts in this district to control pollution? Please indicate the percentage of payment by each group. (Take 100 points and distribute between Federal, State and Local.)**

_____% Federal

_____% State

_____% Local, including owner
100%

(TURN TO CARD 11)

30. **If government assistance is given for pollution control, what level of government should be the principal source of assistance funds for:**

A. Households (obtain response) then ask, for B.
B. Farm (obtain response) then ask, for C.
C. Business (obtain response)

Household	Farm	Business

1. Federal
2. State
3. County
4. Town
5. City or village
6. Unspecified locale
8. D.K.
9. N/R

On CARD 12 is a list of possible sources of pollution.

31. Which THREE of the following sources do you think contribute most to the pollution in the Black Creek. (Let respondent pick three)

_____1. Silt
_____2. Farm and other animal wastes
_____3. Kitchen and laundry waste water
_____4. Farm runoff of fertilizer and pesticides
_____5. Rubbish and trash
_____6. Sewage (D.K.=8; N/R=9)
_____7. Wastes from commerce and industry

32. Now, please rank these three sources you just selected as the first, second and third most important causes.

# _____ First most important cause

_____ Second most important cause

_____ Third most important cause

(TURN TO CARD 13)

33. Would you agree or disagree with the following statements about your community or area.

		Agree	Don't Know	Dis-Agree
a.	The people of this community are usually quick to respond when problems arise requiring action.	1	2	3
b.	This community is like a house divided against itself.	1	2	3
c.	This community is well organized for continuing development.	1	2	3
d.	People here don't care enough about this community to do anything about it.	1	2	3
e.	Groups and organizations with different interests work together in this community rather than fighting among themselves.	1	2	3
f.	Spending money for soil and water development is a good investment.	1	2	3
g.	The watershed program is being pushed too hard in this county.	1	2	3

(TURN TO CARD 14)

34. What facilities do you have for sewage waste disposal from your toilets?

0. Septic tank only
1. Septic tank and drainfield
2. Cesspool/dry well
3. Septic tank with dry well
4. Pipe to ditch or creek
5. Outhouse or equivalent
6. Hooked into town or municipal system
7. Other ______________________
8. D.K.
9. N/R

(Continue if 0,1,2,3 - Otherwise go to 37)

(TURN TO CARD 15)

35. How long has it been since you last had your septic tank pumped out?

0. Never
1. Less than 1 year ago
2. Within 2 years
3. Within 3 years
4. Within 5 years
5. With 10 years
6. More than 10 years ago
7. N/A
8. D.K.
9. N/R

(TURN TO CARD 16)

36. How far is your septic tank from your water source?

1. Under 30 feet
2. 30-49 feet
3. 50-74 feet
4. 75-149 feet
5. 150 feet or more
7. N/A
8. D.K.
9. N/R

(TURN TO CARD 17)

37. In your opinion, how adequate is sewage disposal in this area? (Area refers to Basin, show map)

1. Completely adequate
2. Adequate
3. Inadequate
4. Completely inadequate
8. D.K.
9. N/R

(TURN TO CARD 18A)

38. What is your overall reaction to the program of soil and water conservation and management in your county? (Please check one)

5. There is no program.
4. It is not a very good program.
3. Undecided
2. It is a good program.
1. It is an excellent program.

39. Would you be willing to give up the right to develop a part of your land in order to preserve scenic beauty near a stream?

1. No
2. Yes
7. N/A
8. D.K.

40. A recent practice by some landowners is to open their land to hunters. These hunters pay the landowner for the right to hunt on his property. Would you approve or disapprove of fee hunting on your property?

_____ Approve

_____ Disapprove (Why? ____
____)

IV Watershed Program: Knowledge and Contact

41. Are you familiar with the Black Creek Demonstration Project in this county?

1. Yes (ask questions in this section)
2. No (proceed to question 51)

42. What is this project? ____
____
____

43. What agencies and groups are involved in this project and what does each do?

Agencies	Agencies Role in Project

44. What things about this project are of the greatest interest to you personally? Also, indicate why these are of special interest to you.

a. What has interested you the most?	b. Reason for interest

(TURN TO CARD 18B)

45. From what you know about the program, what is your overall reaction toward it? (Check)

_____ It is an excellent program.
_____ It is a good program.
_____ Undecided - No opinion
_____ It is not a very good program.
_____ It is not a good program at all.

46. Has this program been (or will it be) of direct benefit to you, your farm or your family in any way?

1. Yes 2. No

If yes, ask: How? ______________________________

47. Has it (will it) affect you in any other way?

1. Yes 2. No

If yes, ask: How? ______________________________

48. Has this program been (or will it be) of direct benefit to the community?

1. Yes 2. No

If yes, ask: How? ______________________________

49. Has any agency official or anyone else contacted you about allowing your land to be considered in any way in this program?

1. Yes 2. No

IF YES, ASK:

Person or Agent Contacting You	For What Purpose	Results

50. Have you participated in any way in planning or implementing this project?

1. Yes   2. No

If yes, ask: What specifically did you do and why? ____________________

____

(TURN TO CARD 19)

51. Please indicate whether you would agree or disagree with each of the following statements about the Black Creek Project.

	Agree	Don't Know	Dis-Agree
a. Almost everyone in this area will be benefited from this demonstration project.	1	2	3
b. Most of the major decisions in the demonstration project should be made by the people with professional and technical training in water and soil management.	1	2	3
c. A key to sucess in watershed planning should be to pay careful attention to the wishes and opinions of those who will be affected.	1	2	3

(TURN TO CARD 20)

52. How effective do you think that pollution control for Black Creek is now?

1. Excellent
2. Good
3. Fair
4. Poor
5. Very poor
6. Isn't any
8. D.K.
9. N/R

(TURN TO CARD 21)

53. Which do you think is the better way to get people to cooperate in helping to protect water quality in the Black Creek, by education, financial incentives or by laws and controls?

1. Education
2. Financial Incentives
3. Laws and Controls
4. Other (specify) ____________________
8. D.K.
9. N/R

54. Suppose a Pollution Control Board were established for this area. (Show basin map) Who would you like to see named to that board? (Probe for three names)

1. ____________________

2. ____________________

200 3. ____________________

V Contact with Agencies

(TURN TO CARD 22)

55. What contacts have you had since January 1, 1973 with the following agencies? By contacts, we mean have any of these agencies contacted you or have you contacted any of them for services.

	Agency	None	Once or Twice	More than Three Times
a.	Agricultural Extension Agents (County, Home Demonstration and 4-H)			
b.	Agricultural Stabilization and Conservation Service			
c.	Farmers Home Administration			
d.	Federal Crop Insurance			
e.	Soil Conservation Service			
f.	Allen County Soil and Water Conservation District			
g.	Vocational Agricultural Department (Vo.Ag. and Home Economics Teachers)			
h.	Indiana Employment Service			
i.	County Health Department			
j.	County Welfare Department			
k.	U.S. Army Corps of Engineers			
l.	County Commissioners			
m.	County Council members			
n.	Department of Natural Resources			
o.	Purdue University			

56. How many groups and organization do you belong to, like clubs, fraternal orders, professional associations, civic groups, farm organization, etc. Please do not include church membership and labor unions.

_____ (Number of organization)
(Write "0" if none and go to question 58a)

57. In how many of these organizationshave you served as an officer or committee chairman during the past five years?

_____ (Number of Organizations)
(Write "0" if none)

VI Land Practices

Next, I would like to ask you about various agricultural and conservation practices you may or may not be using on your land.

(TURN TO CARD 24A)

58a. Are you currently using a conservation cropping system?

Growing crops in combination with needed cultural and management measures. Cropping systems include rotations that contain grasses and legumes as well as rotations in which the desired benefits are achieved without the use of such crops.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58b. Are you currently using contour (in general, cross slope) farming?

Farming sloping cultivate land in such a way that plowing preparing and planting, and cultivating are done on the contour. (This includes following established grades of terraces, diversions or contour strips.)

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58c. Are you currently using crop residue management?

Using plant residues to protect cultivated fields during critical erosion periods.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58d. Are you currently using farmstead and feedlot windbreaks?

A belt of trees or shrubs established next to a farmstead or feedlot.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58e. Are you currently using a field border?

A border or strip of perennial vegetation established at the edge of a field by planting or by converting from trees to herbaceous vegetation or shrubs.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58f. Are you currently using field windbreak?

A strip or belt of trees or shrubs established to reduce wind erosion.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58g. Are you currently using grade stabilization structures?

A structure to stabilize the grade or to control head cutting in natural or artificial channels. (Does not include stream channel improvement, streambank protection, diversion or structure for water control.)

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58h. Are you currently using grassed waterway or outlet?

A natural or constructed waterway or outlet shaped or graded and established in vegetation suitable to safely dispose of runoff from a field, diversion, terrace or other structure.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58i. Are you currently using holding ponds and tanks?

A fabricated structure or one made by constructing a pit dam or embankment for temporary storage of animal or agricultural wastes, associated runoff and waste water.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58j. Are you currently using land smoothing?

Removing irregularities on the land surface by use of special equipment.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58k. Are you currently using livestock exclusion?

Excluding livestock from an area where grazing is not wanted (forest land, woodlots, stream channels and banks).

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

581. Are you currently using a pond?

A water impoundment made by constructing a dam across a watercourse or a natural basin, or by excavating a pit or "dugout". (Such ponds do not include spring development or irrigation reservoirs.)

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58m. Are you currently using stripcropping?

Growing crops in a systematic arrangement of strips or bands on the contour to reduce erosion.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58n. Are you currently using surface drains?

A graded channel for collecting excess water within a field. This does not include grassed waterway ro outlet.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58o. Are you currently using tile drains?

A conduit, such as tile, pipe or tubing, installed beneath ground surface and which collects and/or conveys drainage water.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5.. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 24A)

58p. Are you currently using tree planting?

Planting tree seedlings or cuttings.

1. Yes (Ask A)
2. No, but have used it (Ask B)
3. No, never used it (Ask C)
4. N/A
5. N/R

A. On CARD 24B is a list of possible reasons for using this practice. Has this practice hindered, produced no change or improved the: (Read each reason, then circle response)

B. On CARD 24B is a list of possible reasons why you might have used this practice. Did this practice hinder, produce no change or improve the: (Read each reason, then circle response)

C. On CARD 24B is a list of possible reasons why you might consider using this practice. Do you think this practice would hinder, produce no change or improve the: (Read each reason, then circle response)

	Impact of Practice		
Reason for Use	Hindered	Produced No Change	Improved
Reduction of soil runoff and erosion	1 (increase)	2	3 (reduce)
Economic return	1	2	3
Time required to do your work	1 (more time)	2	3 (less time)
General appearance of your land (looks)	1	2	3

(TURN TO CARD 25A)
58q. 1. Which of the following tillage practices are you:

1. Presently using
2. Have used or
3. Never used on your farm?

A. Primary Tillage Practices for Row Crops			B. Preplant disc or Harrowing			C. Plant in Residue without Plowing	
Moldboard Plowing	Chisel Plowing	Double Discing	None	Once	More than One trip	With a sweep before planter (oats, corn)	With a fluted coulter before planter
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3

2. Where answer is YES, ① above, indicate for each practice, the proportion of your land you used it on.

A. Primary Tillage			B. Preplant			C. Plant in Residue	
Moldboard Plowing	Chisel Plowing	Double Discing	None	Once	More than One trip	With a Sweep	With a Fluted Coulter

(Totals 100) (Totals 100) (Less Than 100%)

(TURN TO CARD 25B)
3. Where answer above is NO, ③, please indicate for those practices whether you have (1) no interest in learning more of the practice, (2) some interest in learning of the practice, or (3) definitely interested in learning more about the practice.

	A. Primary Tillage			B. Preplant			C. Plant in Residue	
	Moldboard Plowing	Chisel Plowing	Double Discing	None	Once	More than One trip	With a Sweep	With a Fluted Coulter
No interest	1	1	1	1	1	1	1	1
Some	2	2	2	2	2	2	2	2
Definite Interest	3	3	3	3	3	3	3	3

(TURN TO CARD 25A)
58r. The last practice concerns first, your permanent pastures, and second, your rotation of hay and pastureland. For your permanent pastures please indicate which of the following practices you are:

1. presently using 2. have used 3. never used

Liming	Fertilizing or Manuring	Renovation to improve composition (grass & legumes)	Limit Number of animals	Change Water distribution (pond, stock tank)	Defer grazing in spring or fall to allow regrowth	Brush Control	
						By Hand	Use a Herbicide
1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3

(TURN TO CARD 25A)
(2) For your rotation of hay and pastureland, which of the following practices are you;

1. presently using 2. have used 3. never used

Liming	Fertilizing after 1st or 2nd cutting	Make 1st and 2nd cuttings early (quality)	Defer last cutting and graze or cut after frost (regrowth)	Change water distribution (pond, stocktank, etc) increase movement and utilization	Defer spring grazing to allow regrowth
1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3

VIII Personal and Family Characteristics

59. Sex of respondent

1. Male 2. Female

60. Your present age: __________years

61. Your present marital status:

1. Never married
2. Married
3. Divorced
4. Separated
5. Widowed
9. N/R

(TURN TO CARD 26)

62. Which is the highest level of education that you have completed?

01. No formal education
02. Some grade school
03. Completed grade school
04. Some high school
05. Completed high school
06. Some college
07. Complete college (major ____________________________________)
08. Some graduate work
99. N/R

63. Place of birth ____
City County State

64. How long have you lived here? ____________________ (If always, go to 66)

65. Where have you lived including present location?

	Town	County	State	From (year)	To (year)	Reason for Leaving
1.		Allen	Indiana		1974	
2.						
3.						
4.						

66. What is your present occupation?

1. Farming
2. Non farm (specify) ____________________________________

67. Do you have additional (farm, off-farm) employment?

1. No
2. Yes (specify) ______________________________

68. Does your spouse work outside the home?

1. No
2. Yes ______________________________

(TURN TO CARD 27)
69. What percent of your total 1973 family income came from:

Present occupation	________
Additional employment	________
Spouses occupation	________
	100%

(TURN TO CARD 28)
70. Please tell me the category of your total gross family income for 1973

1. Less than $3,000
2. 3,000 to 4,999
3. 5,000 to 6,999
4. 7,000 to 9,999
5. 10,000 to 12,999
6. 13,000 to 15,999
7. 16,000 to 19,999
8. 20,000 to 24,999
9. 25,000 to 29,999
10. Over $30,000

71. Who do you think is well respected in this area (Show map of Project Boundaries) for his general agricultural practices and abilities? (Interviewer, Probe)

Name: ______________________________

72. Have you ever approached this person for agricultural advice?

1. Yes	8. D.K.
2. No	9. N/R

73. Number of years you have been in farming ________ years.

74. Do you expect that your farm will remain in family hands after you retire?

1. Yes
2. No (what are your plans?) ________

________.

8. D.K.
9. N/R

75. May I have your name and address in case my supervisor would like to verify this interview.

Name ________

Address ________

City ________

Zip ________ Phone ________

Thank you for your cooperation

Economic and Behavioral Aspects of
Sediment Control in the Black
Creek Basin

Socio-Economic Phase
Purdue University
Department of
Agricultural Economics

February, 1976

Schedule Number ____________________

Township ____________________

Section Number ____________________

Lot Number ____________________

Interviewers Name:

____

Date of Interview Completion:

____

Land Recorded in Name of ________________________

____

____

INTRODUCTION:

HELLO! My name is ________________________. I am working with Purdue University and local organizations on an environmental project in Allen County. We interviewed farmers in this area two years ago and we are now interested in learning what changes have occurred in the past two years. All the information you give in this interview will be treated as STRICTLY CONFIDENTIAL and will never be identified with you personally. The interview will take about 2 hours.
(Note: The name is the landowner and this individual may be a renter, in which case the renter should be interviewed).

	DATE	TIME	RESULTS AND SUGGESTIONS
FIRST CALL			
SECOND CALL			
THIRD CALL			

I. General Information

First, I would like to ask you about the land you farmed during the 1975 crop year.

1. Total Acres Farmed ____________
2. Of this total, how many acres do you rent from others? ________________

Of the total acres you personally farm, how many are in each of the following categories:

3. Acres in crops ______________
4. Acres in woodland ____________
5. Acres in pasture ____________
6. Acres in wild-life and recreation ______________
7. Acres in other (buildings, roads, lanes, feedlots, etc.) ________________

The next series of questions relate to the production practices you used for each crop produced during 1974-75 crop season. (If any operations are not performed annually note in margin how often they are performed, e.g. applied agriculture limestone every 5 years).

________ CORN FOR GRAIN ________

8. Acres grown in 1975 ________________
9. Yield per acre ________________
10. Is yield information based on ___ estimate? ___ measured weight?
11. Varieties of seeds used ______________
12. What operations did you perform in the Fall of 1974 or the Spring of 1975 to prepare the land for planting? (e.g. moldboard plow, chisel plow, disk, fertilizer, etc.) (Indicate whether Spring or Fall)
    a.
    b.
    c.
    d.
    e.
13. What operations did you perform at planting time? (e.g. plant, apply fertilizer, appl herbicide, apply insecticide, etc.)
    f.
    g.
    h.
    i.
14. What operations did you perform after planting? (e.g. cultivation, fertilizer applic tion, herbicide application)
    j.
    k.
    l.
    m.

5. What operations did you perform in harvesting the crop? (e.g. picker, combine)

n.

o.

6. For each field operation listed above indicate the type and size of equipment used, the power source, and the field rate of operation.

	Type and Size of Equipment	Power Source (Model # or H.P.)	Field Rate
e.g.,	John Deere, Mounted 6 Bottom 16" Plow	J.D. 4020 Diesel	5 Acres/Hr.
	Horse drawn, 6' Double Disk	6 Horse Team	0.5 Acres/hr)
a.			
b.			
c.			
d.			
e.			
f.			
g.			
h.			
i.			
j.			
k.			
l.			
m.			
n.			
o.			

7. Chemical application

____ operation above, fertilizer analysis ____________ lbs. per acre ____________

____ operation above, fertilizer analysis ____________ lbs. per acre ____________

____ operation above, fertilizer analysis ____________ lbs. per acre ____________

____ operation above, herbicide brand ____________ lbs.orqts./acre ____________

____ operation above, herbicide brand ____________ lbs.orqts./acre ____________

____ operation above, insecticide brand ____________ lbs.orqts./acre ____________

____ operation above, insecticide brand ____________ lbs.orqts./acre ____________

____ operation above, fungicide brand ____________ lbs.orqts./acre ____________

____ operation above, spread manure ____________ Loads, ________ acres in field

----------CORN FOR SILAGE----------

8. Acres grown in 1975 ________________

9. Yield per acre ________________

0. Is yield information based on _____ estimate? _____ measured weight?

1. Varieties of seeds used ____________________

22. What operations did you perform in the Fall of 1974 or the Spring of 1975 to prepare the land for planting?

a.

b.

c.

23. What operations did you perform at planting time?

d.

e.

f.

24. What operations did you perform after planting?

g.

h.

i.

25. What operations did you perform in harvesting the crop?

j.

k.

26. For each field operation listed above indicate the type and size of equipment used, the power source, and the field rate of operation.

	Type and Size of Equipment	Power Source	Field Rate
a.			
b.			
c.			
d.			
e.			
f.			
g.			
h.			
i.			
j.			
k.			

17. Chemical application

____ operation above, fertilizer analysis ____________ lbs. per acre ________

____ operation above, fertilizer analysis ____________ lbs. per acre ________

____ operation above, fertilizer analysis ____________ lbs. per acre ________

____ operation above, herbicide brand ____________ lbs.or qts./acre ________

____ operation above, herbicide brand ____________ lbs.or qts./acre ________

____ operations above, insecticide brand ____________ lbs.or qts./acre ________

____ operation above, insecticide brand ____________ lbs.or qts./acre ________

____ operation above, fungicide brand ____________ lbs.or qts./acre ________

--------------SOYBEANS--------------

28. Acres grown in 1975 ____________________

29. Yield per acre ____________________

30. Is yield information based on _____ estimate? _____ measured weight?

31. Varieties of seeds used __________________________

32. What operations did you perform in the Fall of 1974 or the Spring of 1975 to prepare the land for planting?

a.
b.
c.
d.
e.

33. What operations did you perform at planting time?

f.
g.
h.
i.

34. What operations did you perform after planting?

j.
k.
l.
m.

35. What operations did you perform in harvesting the crop?

n.
o.

36. For each field operation listed above indicate the type and size of equipment used, the power source, and the field rate of operation.

	Type and Size of Equipment	Power Source	Field Rate
a.			
b.			
c.			
d.			
e.			
f.			
g.			
h.			
i.			
j.			
k.			
l.			
m.			
n.			

37. Chemical application

____ operation above, fertilizer analysis ________________ lbs. per acre __________
____ operation above, fertilizer analysis ________________ lbs. per acre __________
____ operation above, fertilizer analysis ________________ lbs. per acre __________
____ operation above, herbicide brand ________________ lbs.or qts./acre __________
____ operation above, herbicide brand ________________ lbs.or qts./acre __________
____ operation above, insecticide brand ________________ lbs.orqts./acre __________
____ operation above, insecticide brand ________________ lbs.or qts/acre __________
____ operation above, fungicide brand ________________ lbs.or qts./acre __________
____ operation above, spread manure ________________ loads, _______ acres in field

--------DOUBLECROPPED SOYBEANS-------

38. Acres grown in 1975 ______________ Following what 1975 crop ________________

39. Yield per acre ______________

40. Is yield information based on ____ estimates? _____ measured weight?

41. Varities of seeds used ____________________

42. What operations did you perform in the Fall of 1974 or the Spring of 1975 to prepare the land for planting?

a.
b.
c.
d.
e.

43. What operations did you perform at planting time?

f.
g.
h.
i.

44. What operations did you perform after planting?

j.
k.
l.
m.

45. What operations did you perform in harvesting the crop?

n.
o.

46. For each field operation listed above indicate the type and size of equipment used, the power source, and the field rate of operation.

	Type and Size of Equipment	Power Source	Field Rate
a.			
b.			
c.			
d.			
e.			
f.			
g.			
h.			
i.			

j.
k.
l.
m.
n.
o.

7. Chemical application

___ operation above, fertilizer analysis ____________________ lbs. per acre ________
___ operation above, fertilizer analysis ____________________ lbs. per acre ________
___ operation above, fertilizer analysis ____________________ lbs. per acre ________
___ operation above, herbicide brand ____________________ lbs.or qts./acre ________
___ operation above, herbicide brand ____________________ lbs.or qts./acre ________
___ operation above, insecticide brand ____________________ lbs.or qts./acre ________
___ operation above, insecticide brand ____________________ lbs.or qts./acre ________
___ operation above, fungicide brand ____________________ lbs.or qts./acre ________
___ operation above, spread manure ____________ Loads, ________ acres in field

------WHEAT------

8. Acres grown in 1975 ________________

9. Yield per acre ________________

0. Is yield information based on ____ estimate? ____ measured weight?

1. Varieties of seeds used ______________________

2. What operations did you perform in the Fall of 1974 or Spring of 1975 to prepare the land for planting?

a.
b.
c.
d.
e.

3. What operations did you perform at planting time?

f.
g.
h.
i.

4. What operations did you perform after planting?

j.
k.
l.
m.

5. What operations did you perform in harvesting the crop?

n.
o.

56. For each field operation listed above indicate the type and size of equipment used, the power source, and the field rate of operation.

	Type and Size of Equipment	Power Source	Field Rate
a.			
b.			
c.			
d.			
e.			
f.			
g.			
h.			
i.			
j.			
k.			
l.			
m.			
n.			
o.			

57. Chemical Application

____ operation above, fertilizer analysis ____________________ lbs. per acre __________

____ operation above, fertilizer analysis ____________________ lbs.per acre __________

____ operation above, fertilizer analysis ____________________ lbs.per acre __________

____ operation above, herbicide brand ____________________ lbs.or qts./acre __________

____ operation above, herbicide brand ____________________ lbs.or qts./acre __________

____ operation above, insecticide brand ____________________ lbs.or qts./acre __________

____ operation above, insecticide brand ____________________ lbs.or qts./acre __________

____ operation above, fungicide brand ____________________ lbs.or qts./acre __________

____ operation above, spread manure, ____________ loads, ____________ acres in field

------------------OATS--------------------

58. Acres grown in 1975 ____________________

59. Yield per acre ____________________

60. Is yield information based on estimate?____ measured weight? _____

61. Varieties of seeds used ________________________

62. What operations did you perform in the Fall of 1974 or Spring of 1975 to prepare the land for planting?
a.
b.
c.
d.
e.

63. What operations did you perform at planting time?
f.
g.
h.
i.

64. What operations did you perform after planting?

j.
k.
l.
m.

65. What operations did you perform in harvesting the crop?

n.
o.

66. For each field operation listed above, indicate the type and size of equipment used, the power source, and the field rate of operation.

	Type and Size of Equipment	Power Source	Field Rate
a.			
b.			
c.			
d.			
e.			
f.			
g.			
h.			
i.			
j.			
k.			
l.			
m.			
n.			
o.			

67. Chemical Application

____ operation above, fertilizer analysis ______________________ lbs. per acre ____
____ operation above, fertilizer analysis ______________________ lbs. per acre ____
____ operation above, fertilizer analysis ______________________ lbs. per acre ____
____ operation above, herbicide brand ______________________ lbs. or qts./acre ____
____ operation above, herbicide brand ______________________ lbs. or qts./acre ____
____ operation above, insecticide brand ______________________ lbs. or qts./acre ____
____ operation above, insecticide brand ______________________ lbs. or qts./acre ____
____ operation above, fungicide brand ________________ lbs. or qts./acre ________
____ operation above, spread manure __________ loads, ________ acres in field

---------------HAY---------------

68. Acres grown in 1975 ______________
69. Yield per acre ______________
70. Is yield information based on estimate? _____ measured tons? _____
71. Varieties of seed used ______________________

72. What operations did you perform to care for or harvest the crop (e.g. applied fertilizer, baled hay)

a.

b.

c.

d.

73. For each field operation listed above indicate the type and size of equipment used, the power source, and the field rate of operation.

Type and Size of Equipment	Power Source	Field Rate
a.		
b.		
c.		
d.		

74. Chemical Application

___ operation above, fertilizer analysis ____________ Tons per acre ________

___ operation above, herbicide kind ____________ #'s per acre ________

----------OTHER CROPS (SPECIFY)---------

75. Acres grown in 1975 ____________

76. Yield per acre ____________

77. Is yield information based on estimate? _____ measured tons? _____

78. Varieties of seed used ____________

79. What operations did you perform to care for or harvest the crop?

a.

b.

c.

d.

80. For each field operation listed above, indicate the type and size of equipment used, the power source, and the field rate of operation.

Type and Size of Equipment	Power Source	Field Rate
a.		
b.		
c.		
d.		

81. Chemical Application

___ operation above, fertilizer analysis ____________ Tons per acre ________

___ operation above, herbicide kind ____________ #'s per acre ________

------------------PASTURE------------------

82. Acres grown in 1975 ____________

83. Yield per acre ____________

84. Is yield information based on estimate? _____ measured tons? _____

85. *Varieties of seed used* ________________

86. What operations did you perform to care for or harvest the crop? (e.g. applied fertilizer, baled hay)

a.

b.

c.

d.

. For each field operation listed above, indicate the type and size of equipment used, the power source, and the field rate of operation.

Type and Size of Equipment	Power Source	Field Rate
a.		
b.		
c.		
d.		

87. Chemical application

__ operation above, fertilizer analysis ____________ Tons per acre ______

__ operation above, herbicide kind ____________ #'s per acre ______

Farm Labor

88. How many year-round full-time people work on your farm? (Include yourself, family members not in school, others) __________

89. How many, excluding yourself, are paid? __________

90. How much part-time labor do you use on your farm? (in days)? (Consider 8 hours a day)

___ __________

91. How many days are paid? __________

92. During what particular seasons are these people employed (e.g., planting, harvest, year-round)? ____________________

93. On the average, how many hours a day are spent on the livestock chores (e.g., 2 people, 3 hrs./day = 6 hrs. total)? __________ hrs.

Livestock

94. How many of the following animals do you have?

a. Horses______

b. Beef cows ______

c. Calves ______

d. Milk cows ______

e. Hogs ______

f. Sheep ______

g. Chickens ______

h. Other (please specify)

95. What is the ration of the adult animals (include calves) (e.g. Horses: 5 lbs oats & pasture)

a. Horses
b. Beef cows
c. Calves
d. Milk Cows
e. Hogs
f. Sheep
g. Chickens
h. Other

96. How much grain storing capacity do you have available?

Earn corn storage for ____________________ bu.
Shelled corn storage for __________________ bu.
Other (please specify) __________________ bu.

97. Do you have grain drying facilities? Yes _____ No _____

97a. If Yes, what is capacity in bu. per hour? __________(10% points of moisture)

Do you have other farming equipment which has not been previously listed in this questionnaire? Yes ___ No ____
If Yes, please list:

Attitude Toward Soil and Water Conservation

98. Have you established a conservation plan with the Soil and Water Conservation Distric Office during the past 2 years? _________

99. I will now read a list of activities you might encounter while working with your land. Where do you go, or who would you seek out for information when you have a problem with:

	Handle it Myself	Friend or Neighbor	Small Business or Professional (Co-op, vet)	A Local Government Agency (SCS, CES)	N/R
Crop disease	1	2	3	4	0
Insect control	1	2	3	4	0
Machinery	1	2	3	4	0
Livestock	1	2	3	4	0
Crop rotation	1	2	3	4	0
Farm Management	1	2	3	4	0
Soil Management	1	2	3	4	0
Fertilizer usage	1	2	3	4	0
New crop varieties	1	2	3	4	0
Non farm land uses	1	2	3	4	0
Potential pollution	1	2	3	4	0
Minimum tillage	1	2	3	4	0
Drainage	1	2	3	4	0
Irrigation	1	2	3	4	0

100. Now, we would like to get your opinion on several statements and ask whether you agree or disagree with each. There are, of course, no "right" or "wrong" answers.

		Agree	Don't Know	Disagree
a.	Conservation of soil is a real problem in this area.	1	8	3
b.	The average landowner in this county stands to lose more than he will gain by soil and water development programs.	1	8	3
c.	The cost of soil erosion reducing practices (e.g. field borders, grassed waterways) should be borne entirely by those who adopt them.	1	8	3
d.	The federal government should play an important role in soil conservation programs in this county.	1	8	3
e.	Pollution of the streams is a major problem in this country.	1	8	3
f.	Landowners have little opportunity to express their opinions in planning watershed projects.	1	8	3

101. I will read several statements. Please tell me whether you strongly disagree, disagree, agree, or strongly agree with each statement.

		S.D.	D.	D.K.	A.	S.A.
a.	Even considering the cost, all available pollution control technique should be used.	5	4	8	2	1
b.	Federal taxation to clean up our water completely wouldn't be too expensive to consider.	5	4	8	2	1
c.	It is very important to clean up the environment.	5	4	8	2	1

III. Attitudes Toward Local Community and County

102. Suppose a watershed protection district were declared for this area. Would you be in favor of specific standards for households, farms, communities, and industries to control pollution?

1 Strongly favor
2 Favor
3 Neutral
4 Against
5 Strongly against
8 D.K.
0 N/R

103. Who should pay for the efforts in this district to control pollution? Please indicate the percentage of payment by each group. (Take 100 points and distribute between Federal, State and Local).

_____% Federal + _____% State + _____% Local, including % by owner = 100%

104. Which THREE of the following sources do you think contribute most of the pollution in the Black Creek. (Let respondent pick three)

_____ a. Silt
_____ b. Farm and other animal wastes
_____ c. Kitchen and laundry waste water
_____ d. Farm runoff of fertilizer & pesticides
_____ e. Rubbish and trash
_____ f. Sewage
_____ g. Wastes from commerce and industry

(D.K.=8, N/R=0)

105. Now, please rank these three sources you just selected as the first, second and third most important causes.

#_____ First most important cause
#_____ Second most important cause
#_____ Third most important cause

106. Would you agree or disagree with the following statements about your community or area.

	Agree	Don't Know	Disagree
a. The people of this community are usually quick to respond when problems arise requiring action.	1	8	3
b. This community is well organized.	1	8	3
c. People here don't care enough about this area to do anything about its problems.	3	8	1
d. Spending money for soil and water development is a good investment.	1	8	3
e. The watershed program is being pushed too hard in this county.	3	8	1

107. What is your overall reaction to the program of soil and water conservation and management in your county? (Please check one)

5. There is no program.
4. It is not a very good program.
3. Undecided
2. It is a good program.
1. It is an excellent program.

108. Would you be willing to give up the right to develop a part of your land in order to preserve scenic beauty near a stream?

1. No
2. Yes

7. N/A
8. D.K.
0. N/R

IV. Watershed Program: Knowledge and Contact

109. How familiar are you with the Black Creek Demonstration Project in this county?

1. Never heard of it.
2. Heard but no contact.
3. Little Contract.
4. Contact w/ various project representatives.
5. Much contact and participation.

110. From what you know of the program, what is your overall reaction toward it? (Check)

____ It is an excellent program. (1) ____ It is not a very good program. (3)
____ It is a good program. (2) ____ It is not a good program at all. (4)
____ Undecided-No opinion. (8)

111. How much have you participated in planning or implementing this project?

1. None 2. A little 3. Very much

112. If 2 or 3, how have you participated in the project?

113. If 2 or 3, Why did you participate in the project?

114. Please indicate whether you would agree or disagree with each of the following statements about the Black Creek Project.

	Agree	Don't Know	Disagree
a. Almost everyone in this area will be benefited from this demonstration project.	1	8	3
b. Most of the major decisions in the demonstration project should be made by the people with professional and technical training in water and soil management.	1	8	3
c. A key to success in watershed planning should be to pay careful attention to the wishes and opinions of those who will be affected.	1	8	3

115. How effective do you think that pollution control for Black Creek is now?

1. Excellent
2. Good
3. Fair
4. Poor
5. Very poor
6. Isn't any
8. Don't Know
0. N/R

116. What do you think is the better way to get people to cooperate in helping to protect water quality in the Black Creek, by education, financial incentives or by laws and controls?

1. Education
2. Financial Incentives
3. Laws and Controls
4. Other (specify) ____________________
8. D.K.
0. N/R

117. Would you seek technical and financial assistance for using soil and water conservation practices (e.g., field borders, grassed waterways)? Yes ___ No ___

118. Suppose a Pollution Control Borad were established for this area. (Show basin map). Is there anyone you would like to see named to that board. (PROBE).

Person's Name ______________________________

V. Contacts with Agencies

119. What contacts have you had since January 1, 1975 with the following agencies? By contacts, we mean have any of these agencies contacted you or have you contacted any of them for services?

Agency	None	Once or Twice	More than Three Times
a. Agricultural Extension Agents (County, Home Demonstration and 4-H)			
b. Agricultural Stabilization and Conservation Service			
c. Farmers Home Administration			
d. Federal Crop Insurance			
e. Soil Conservation Service			
f. Allen County Soil and Water Conservation District			
g. Vocational Agricultural Department (Vo. Ag. and Home Economic Teachers)			
h. Indiana Employment Service			
i. County Health Department			
j. County Welfare Department			
k. U.S. Army Corps of Engineers			
l. County Commissioners			
m. County Council members			
n. Department of Natural Resources			
o. Purdue University			

VI. Land Practices

120. Are you currently using a conservation cropping system? (Growing crops in combination with needed cultural and management measures. Cropping systems include rotations that contain grasses and legumes as well as rotations in which the desired benefits are achieved without the use of such crops.)

a. Yes (Ask A)
b. No, but have used it (Ask B)
c. No, never used it (Ask C)
d. N/A
e. N/R

121. If yes, did you start using the practice as a result of the Black Creek Project?

Yes _____ No _____

122. Are you currently using contour (in general, cross slope) farming? (Farming sloping cultivate land in such a way that plowing preparing and planting, and cultivating are done on the contour. This includes following established grades of terraces, diversions or contour strips.)

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

123. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

124. Are you currently using crop residue management? (Using plant residues to protect cultivated fields during critical erosion periods.)

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

125. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

126. Are you currently using farmstead and feedlot windbreaks? (A belt of trees or shrubs established next to a farmstead or feedlot.)

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

127. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

128. Are you currently using a field border? (A border or strip of perrenial vegetation established at the edge of a field by planting or by convering from trees to herbaceous vegetation or shrubs.)

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

129. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

130. Are you currently using field windbreak? (A strip or belt of shrubs established to reduce wind erosion.)

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

131. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

132. Are you currently using grade stabilization structures? (A structure to stabilize or to control head cutting in natural or artificial channels. (Does not include stream channel improvement, streambank protection, diversion or structure for water control.)

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

133. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

134. Are you currently using grassed waterway or outlet? (A natural or constructed waterway or outlet shaped or graded and established in vegetation suitable to safely dispose of runoff from a field, diversion, terrace or other structure.

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

135. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

136. Are you currently using holding ponds or tanks? (A fabricated structure or one made by constructing a pit dam or embankment for temporary storage of animal of agricultural wastes, associated runoff and waste water)

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

137. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

138. Are you currently using land smoothing? (Removing irregularities on the land surface by use of special equipment.)

a. Yes,
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

139 If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

140. Are you currently using livestock exclusion? (Excluding livestock from an area where grazing is not wanted (forest land, woodlots, stream channels and banks).

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

141. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

142. Are you currently using a pond? (A water impoundment made by constructing a dam across a watercourse or a natural basin, or by excavating a pit or "dugout". (Such ponds do not include spring development or irrigation reservoirs.))

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

143. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

144. Are you currently using stripcropping? (Growing crops in a systematic arrangement of strips or bands on the contour to reduce erosion.)

a. Yes,
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

145. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

146. Are you currently using surface drains? (A graded channel for collecting excess water within a field. This does not include grassed waterways or outlet,

a. Yes,
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

147. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

148. Are you currently using tile drains? (A conduit, such as tile, pipe or tubing, installed beneath ground surface and which collects and/or conveys drainage water.)

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

149. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

150. Are you currently using tree planting? (Planting tree seedlings or cuttings)

a. Yes
b. No, but have used it
c. No, never used it
d. N/A
e. N/R

151. If yes, did you start using this practice as a result of the Black Creek Project?

Yes _____ No _____

152. All of us want certain things out of life. When you think about what really matters to you, what are your wishes and hopes for the future? In other words, if you imagined your future in the best possible light, what would you have achidved? (Encourage respondent to think deeply and be explicit since this question is difficult to express.)

153. What would you consider to be a turn for the worse? In other words, what would characterize the worst possible future?

154. On a scale from one (low) to ten, rank your present level of satisfaction with your life as a whole. ________

155. Similarly, on a scale from one (low) to ten, rank your life as you expect it to be in five years. ________

156. Suppose your income increased greatly, on what would you spend most of your money? (e.g. vacation, community, farm)

157. a) Rank each of the following categories in their order of importance to you. That is, assuming you had adequate income, rank them according to the amount of time you would want to spend in each. (One is high)

____ family ____ church ____ community ____ farming ____ Other job (if applicable)

b) What is your goal or aim for each category listed above? In other words, what would you like to accomplish in each or what would you like that group to accomplish?

Family ________________________________

Church ________________________________

Community ________________________________

Farming ________________________________

Other Job ________________________________

158. Rank the following possible objectives in the order of their importance in the way you operate your farm (one is high, seven is low). If you have other goals, feel free to add them.

____ Stability of income
____ High level of consumption
____ Fast increase in value or site of farm
____ Time for family and non-work activity
____ Certainty of income
____ Condition of your farm (equipment, buildings, land)
____ Greatest yields
____ Other:

159. Who do you think is well respected in this area for his general agricultural practices and abilities? (Interviewer, probe for name)

Name ________________________________

160. If given, have you gone to this person for agricultural advice? Yes ___ No ___

161. Please tell me the category of your total gross income for 1975.

1. Less than $3,000
2. 3,000 to 4,999
3. 5,000 to 6,999
4. 7,000 to 9,999
5. 10,000 to 12,999
6. $13,000 to 15,999
7. 16,000 to 19,999
8. 20,000 to 24,000
9. 25,000 to 29,000
10. Over $30,000

162. Do you have additional(farm, off-farm) employment? 1. No ____
Yes (specify) ______________________________

163. What percent of your total 1975 family income came from:

Farming ______________
Additional Employment ________
Spouse's Occupation ________
100%

164. What percentage of your farming income came from:

crops ________
livestock ________
Other
(Specify) ________

165. What do you consider to be the market value of your land per acre? ____________

166. May I have your name and address in case my supervisor would like to verify this interview?

Name ______________________________

Address ______________________________

City ______________________________

Zip Code ______________ Phone ______________

THANK YOU FOR YOUR COOPERATION

DESCRIPTION OF VARIABLES

SCHNUM2*	Schedule number
CARDNUM2	Computer card number
INTERVU2	Interviewer
TYPEQ	Type of questionnaire (sociology or economics)
TOTACR2	Total acres farmed
ACRENT2	Acres rented
ACRCROP2	Acres in crops
ACRWOD2	Acres in woodland
ACRPAS2	Acres in pasture
ACRWILD2	Acres in wildlife and recreation
ACRIO2	Acres in other (bldg, etc.)
CNGACR2	Acres of corn for grain
CNGYELD2	Yield per acre for grain
CNGN2	Lbs. of nitrogen/acre for grain
CNGP2	Lbs. of phosphorus/acre for grain
CNGK2	Lbs. of potash/acre for grain
CNSACR2	Acres of corn for silage
CNSN2	Lbs. of Nitrogen/acre for silage
CNSP2	Lbs. of Phosphorus/acre for silage
CNSK2	Lbs. of potash/acre for silage
SYBACR2	Acres of soybeans
SYBN2	Lbs. of nitrogen/acre for soybeans
SYBP2	Lbs. of phosphorus/acre for soybeans
SYBK2	Lbs. of potash/acre for soybeans
WHTACR2	Acres of wheat
WHTYELD2	Yield/acre of wheat
WHTN2	Lbs. of nitrogen/acre of wheat
WHTP2	Lbs. of phosphorus/acre of wheat
WHTK2	Lbs. of potash/acre of wheat
OTSACR2	Acres of oats
OTSYELD2	Yield/acre of oats
OTSN2	Lbs. of nitrogen/acre of oats
OTSP2	Lbs. of phosphorus/acre of oats
OTSK2	Lbs. of potash/acre of oats
HAYACR2	Acres of hay
HAYYELD2	Yield/acre of hay (tons)
HAYN2	Lbs. of nitrogen/acre of hay
HAYP2	Lbs. of phosphorus/acre of hay
HAYK2	Lbs. of potash/acre of hay
PASACR2	Acres of pasture
PASYELD2	Yield/acre of pasture

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* The number 2 designates that this is the second set of questionnaires.

PASN2	Lbs. of nitrogen/acre of pasture
PASP2	Lbs. of phosphorus/acre of pasture
PASK2	Lbs. of potash/acre of pasture
FARMWORK	No. of full-time farm workers
CHORES	Hrs./day spent on livestock chores
HORSES2	Number of horses
BEEFCOW2	Number of beefcows
CALVES2	Number of calves
MILKCOWS2	Number of milk cows
HOGS2	Number of hogs
SHEEP2	Number of sheep
CHICKEN2	Number of chickens
ECORNSTR	Ear corn storage capacity
SCORNSTR	Shell corn storage capacity
OTHERSTR	Other storage
DRYING	Does the farm have a dryer? (1=yes, 2=no)
CONPLAN2	Established conservation plan in last 2 years? (1=yes, 2=no)
CROPDIS*	What would you do about crop disease?
INSECT*	What would do about insect control?
MACHINE*	What would you do about machinery problems?
LSTOCK*	What would you do about livestock problems?
ROTATE*	What would you do about crop rotation?
MANAGE*	What would you do about farm management?
SOILMAN*	What would you do about soil management?
FERTUSE*	What would you do about fertilizer use?
CROPVAR*	What would you do about new crop varieties?
NFLU*	What would you do about non-farm land use?
POTPOL*	What would you about about potential pollution?
MINTILL*	What would you do about minimum tillage"
DRANAGE*	What would you do about drainage?
IRRIGATE*	What would you do about irrigation?
CONSOIL**	Conservation of soil real problem in area.
AVGLAND**	Farmers lose more than gain from development programs.
COSTSOIL**	Farmers should pay cost of development practices.
FEDGOVT**	Federal government important in conservation programs.
POLSTREM**	Pollution of streams a major problem
LANDOWN**	Landowners can't express opinions.

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* CODE: 1= handle it myself, 2=got to friend or neighbor; 3=go to small business or professional; 4=go to local government agency; 0= no response.

**CODE: 1=agree; 2=don't know; 3=disagree

HIGHCOST*	Conservation should be used despite cost.
FEDTAXES*	Federal taxation to pay for conservation is viable alternative.
IMPTCLEN*	Very important to clean up environment.
STANDARD**	Favor poll control standards
POLCAUS1[a]	Sources of pollution in Black Creek-1
POLCAUS2[a]	Sources of pollution in Black Creek-2
POLCAUS3[a]	Sources of pollution in Black Creek-3
ETHGRP2	Ethnic group (1=Amish, 2=Non-Amish)
PEOPLE2[b]	Community quick respond to problems
COMMUNITY[b]	Community well organized
PEOCARE2[b]	People don't care enough to solve problems
SPEND2[b]	Spend money for soil and walter development good
PUSHTOO[b]	Watershed program pushed too hard
REACTION	Overall reaction to watershed conservation program (1=excellent, 2=good, 3=undecided, 4=not very good, 5=no prog.)
RIGHTDEV	Give up right to develop land to preserve scenic beauty (1=no, 2=yes, 8=DK, 7=N/A)
FAMILIAR	How familiar are you with the Black Creek Project (1=never heard, 2=heard, no contact, 3=little contact, 4=contact with project representative, 5=much contact and participation)
PREACSHUN	Reaction to BCP (1=excellent, 2=good, 3=undecided, 4=not very good, 5=not good at all)
PARTICIPT	Participation in BCP (1=none, 2=a little, 3=very much)
BENEFIT	Almost everyone will benefit from project (1=agree, 2=DK, 3=disagree)
DECISION	Most project decisions should be made by professionals. (1=agree 2=DK, 3=disagree)
SUCCESS2	Project should attend to wishes of farmers (1=agree, 2=DK, 3=disagree)
EFFECTIVE	How effective is pollution control in Black Creek now? (1=excellent, 2=good, 3=fair, 4=poor, 5=very poor, 6=isn't any, 8=DK)
PEOCOOP2	Better way to get cooperation in program (1=education, 2=money, 3=laws, 4=other, 8=DK)
ASSTANCE	Would you seek assistance in using conservation practices? (1=no, 2=yes)
AGEXAG2	Contact with: (a) Extension agents
AGSTCO2	(b) Ag Stability & Conservation Service
FAHMAD2	(c) Farmers Home Administration
FDCRIN2	(d) Federal Crop Insurance

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* CODE: 1=strongly agree, 2=agree, 3=don't know, 4=disagree, 5=strongly disagree.

** 1 = strongly favor, 2=favor, 3=neutral, 4=against, 5=strongly against, 8 = DK, 0 = N/R

[a] 1=silt, 2=farm waste, 3=kitchen waste, 4=fertilizer and pesticide, 5=rubbish and trash, 6=sewage, 7=commerce and industry)

[b] 1=agree, 2=DK, 3=disagree

SOCNSV2	Contact with: (e) Soil Conservation Service
ACSWCD2	(f) Allen County SWCD
VOAGDT2	(g) Vocation ag. department
INEMSV2	(h) Indy. employ serv.
CYHLDT2	(i) County Health Department
CYWLDT2	(j) County Welfare Department
USACEG2	(k) U.S. Army Corps of Engineers
CTYCOM2	(l) County Commissioner
CTCNMM2	(m) County Council
DNR2	(o) Dept. of Natural Resources
PURDUE2	(p) Purdue University
	Code: (1=none, 2=1 or 2 times, 3=+3 times, 7=N/A)
CONCROP1	Use conservative crop system
CONCROP2	from BCP
CONTURE1	Use contour farming
CONTURE2	from BCP
RESIDUE1	Use crop residue management
RESIDUE2	from BCP
WINDBRK1	Use farmstead/feedlot windbreak
WINDBRK2	from BCP
BORDERS1	Use field borders
BORDERS2	from BCP
FELDBRK1	Use field windbreak
FELDBRK2	from BCP
GRADEST1	Use grade stabilization structures
GRADEST2	from BCP
GRASSED1	Use grassed waterway
GRASSED2	from BCP
	Codes: for all "1s": 1=no never, 2=yes, 3=no, but have, 7=N/A, 8=N/R for all "2s": 1=no, 2=yes
HPONDS1	Use holding ponds
HPONDS2	from BCP
SMOOTHE1	Use land smoothing
SMOOTHE2	from BCP
EXCLUDE1	Use livestock exclusion
EXCLUDE2	from BCP
PONDS1	Use ponds
PONDS2	from BCP
STRIP1	Use strip cropping
STRIP2	from BCP
DRAIN1	Use surface drains
DRAIN2	from BCP
TILES1	Use tile drains
TILES2	from BCP
TREEPLA1	Use tree-planting
TREEPLA2	from BCP
SATISFY1(?)	
SATISFY2(?)	

INCOME1	Total gross income for 1975 (1= less than 3,000, 2=3000-4999; 3=5000-6999; (4)7000 -9999; (5)10000-12999; (6)=13000-15999; (7)=16000-19999; (8) 20000-24000; (9) 25000-29000; (1) over 30000)
EMPLOY	Off farm employment (1=no, 2=yes)
INCOME2	Percent income from (a) farming
INCOME3	Percent income from (b) additional employment
INCOME4	Percent income from (c) spouse occupation
INCOME5	Percent farm income from (a) crops
INCOME6	Percent farm income from (b) livestock
INCOME7	Percent farm income from (c) other
MARKET	Market value of land/acre
PRACTICE	Computer variables IGNORE
FAVORPOL	
FAVORBCP	
TAKEPART	

	MEAN	MODE	STD ERR	STD DEV	MEDIAN	VARIANCE
SCHNUM2	56.000	1.000	3.986	36.418	53.000	1400.091
CARDNUM2	1.000	1.000	0	0	1.000	0
INTERVU2	1.809	1.000	.151	1.421	1.383	2.020
TYPEQ	1.955	3.000	.141	1.331	2.179	1.771
TOTACR2	165.913	80.000	21.475	178.381	94.000	31819.897
ACRENT2	201.278	40.000	47.578	201.857	78.000	40746.212
ACRCROP2	141.471	85.000	20.490	170.200	75.250	28967.999
ACRWOD2	17.122	4.000	2.208	14.137	12.333	199.860
ACRPAS2	20.571	5.000	3.237	19.150	18.750	366.723
ACRWILD2	9.889	2.000	2.903	8.710	6.000	75.861
ACRIO2	5.400	3.000	.511	4.118	4.167	16.955
CNGACR2	56.820	27.000	10.704	75.686	24.500	5728.396
CNGYELD2	73.045	80.000	4.368	28.973	75.500	839.440
CNGN2	49.675	24.000	5.980	37.820	36.500	1430.379
CNGP2	40.125	24.000	3.696	23.375	36.000	546.369
CNGK2	46.800	24.000	6.091	38.526	34.000	1484.215
CNSACR2	7.692	3.000	1.487	5.360	6.000	28.731
CNSYELD2	9.500	4.000	2.393	6.331	8.000	40.083
CNSN2	48.857	12.000	12.233	32.365	36.000	1047.476
CNSP2	32.429	12.000	4.750	12.568	33.000	157.952
CNSK2	32.429	12.000	4.750	12.568	33.000	157.952
SYBACR2	95.271	10.000	18.702	91.622	50.000	8394.543
SYBYELD2	34.273	35.000	1.624	7.617	34.786	58.017
SYBN2	9.750	9.000	1.666	4.713	9.000	22.214
SYBP2	35.375	36.000	7.414	20.969	36.000	439.696
SYBK2	40.667	36.000	11.513	34.540	30.000	1193.000
WHTACR2	35.167	10.000	6.674	41.678	17.167	1737.031
WHTYELD2	43.590	30.000	1.965	12.268	43.750	150.511
WHTN2	48.821	24.000	6.695	35.427	36.000	1255.041
WHTP2	41.893	24.000	4.739	25.077	30.500	628.840
WHTK2	38.071	24.000	4.377	23.163	30.100	536.513
OTSACR2	21.313	15.000	2.876	18.190	15.250	330.868
OTSYELD2	84.103	50.000	11.247	70.239	75.000	4936.568
OTSN2	28.788	24.000	2.046	11.752	27.750	138.110
OTSP2	30.485	24.000	2.225	12.782	28.250	163.383
OTSK2	30.636	24.000	2.186	12.559	28.250	157.739
HAYACR2	20.156	17.000	2.132	12.059	17.125	145.410
HAYYELD2	5.000	2.000	1.863	9.858	2.125	97.181
HAYN2	15.636	12.000	2.718	9.014	12.667	81.255
HAYP2	16.455	12.000	2.447	8.116	12.750	65.873
HAYK2	25.083	12.000	8.913	30.876	13.000	953.356
PASACR2	21.000	3.000	3.030	16.870	18.750	284.750
PASYELD2	3.500	1.000	2.500	3.536	3.500	12.500
PASN2	9.286	12.000	1.322	3.498	10.500	12.238
PASP2	9.857	12.000	1.164	3.078	11.629	9.476
PASK2	12.000	12.000	1.574	4.163	11.750	17.333

	MEAN	MODE	STD ERR	STD DEV	MEDIAN	VARIANCE
FARMWORK	2.162	1.000	.275	1.675	1.563	2.806
CHORES	5.032	3.000	.754	4.197	3.800	17.616
HORSES2	13.600	10.000	2.376	13.016	10.500	169.421
BEEFCOW2	8.857	10.000	1.394	5.216	8.500	27.209
CALVES2	9.773	4.000	2.155	10.109	6.167	102.184
MILKCOWS2	9.033	12.000	.987	5.404	9.500	29.206
HOGS2	90.000	8.000	18.103	102.404	40.000	10486.516
SHEEP2	24.833	3.000	16.051	55.604	6.500	3091.788
CHICKEN2	528.409	30.000	451.406	2117.283	30.500	4482886.729
ECORNSTR	2253.514	2000.000	230.712	1403.363	2007.500	1969428.979
SCORNSTR	3683.333	8000.000	873.212	3704.727	1050.000	.1372E+08
OTHERSTR	3301.389	1000.000	820.111	4920.663	1816.667	.2421E+08
DRYING	1.241	1.000	.081	.435	1.159	.190
CONPLAN2	1.667	2.000	.076	.478	1.750	.228
CROPDIS	2.750	4.000	.193	1.136	2.955	1.336
INSECT	2.588	3.000	.189	1.104	2.750	1.219
MACHINE	1.725	1.000	.148	.933	1.333	.871
LSTOCK	2.825	3.000	.094	.594	2.941	.353
ROTATE	1.579	1.000	.183	1.130	1.155	1.277
MANAGE	1.524	1.000	.153	.994	1.177	.987
SOILMAN	2.730	4.000	.218	1.326	3.143	1.758
FERTUSE	2.405	3.000	.192	1.166	2.679	1.359
CROPVAR	2.054	1.000	.169	1.026	1.938	1.053
NFLU	2.769	4.000	.290	1.478	3.633	2.185
POTPOL	2.813	4.000	.252	1.424	3.611	2.028
MINTILL	2.643	4.000	.248	1.311	2.500	1.720
DRANAGE	2.949	4.000	.204	1.276	3.525	1.629
IRRIGATE	3.625	4.000	.263	.744	3.833	.554
CONSOIL	2.170	3.000	.180	1.312	2.558	1.721
AVGLAND	1.133	1.000	.051	.344	1.077	.118
COSTSOIL	2.453	3.000	.167	1.218	2.543	1.483
FEDGOVT	2.585	1.000	.374	2.721	1.472	7.401
POLSTREM	1.277	1.000	.066	.452	1.191	.204
LANDOWN	3.038	3.000	.316	2.304	2.577	5.306
HIGHCOST	1.400	1.000	.078	.496	1.333	.246
FEDTAXES	4.302	2.000	.319	2.325	3.985	5.407
IMPTCLEN	1.098	1.000	.042	.300	1.054	.090
STANDARD	3.020	2.000	.245	1.732	2.417	3.000
POLCAUS1	3.886	1.000	.370	2.452	4.786	6.010
POLCAUS2	4.585	6.000	.275	1.760	4.938	3.099
POLCAUS3	4.359	3.000	.264	1.646	4.417	2.710
STATUS	2120.010	47.887	362.562	2205.379	1008.824	4863694.547
ETHGRP2	1.640	2.000	.051	.483	1.719	.233

	MEAN	MODE	STD ERR	STD DEV	MEDIAN	VARIANCE
PEOPLE2	1.961	1.000	.247	1.766	1.500	3.118
COMMUNITY	2.000	1.000	.247	1.766	1.545	3.120
PEOCARE2	1.608	1.000	.241	1.721	1.186	2.963
SPEND2	1.020	1.000	.020	.141	1.010	.020
PUSHTOO	1.116	1.000	.049	.324	1.066	.105
REACTION	1.049	1.000	.034	.218	1.026	.048
RIGHTDEV	2.694	1.000	.359	2.510	1.694	6.300
FAMILIAR	4.132	5.000	.132	.952	4.450	.925
REACSHUN	1.063	1.000	.035	.245	1.033	.060
PARTICPT	2.039	2.000	.108	.774	2.048	.598
BENEFIT	1.125	1.000	.048	.334	1.071	.112
DECISION	2.212	1.000	.333	2.404	1.368	5.778
SUCCESS2	1.173	1.000	.139	1.004	1.040	1.009
EFFECTIVE	1.088	1.000	.049	.288	1.048	.083
PEOCOOP2	2.298	1.000	.282	1.933	1.750	3.735
ASSTANCE	1.896	2.000	.045	.309	1.942	.095
AGEXAG2	1.702	1.000	.121	.832	1.440	.692
AGSTCO2	1.911	1.000	.138	.925	1.714	.856
FAHMAD2	1.064	1.000	.036	.247	1.034	.061
FDCRIN2	1.191	1.000	.058	.398	1.118	.158
SOCNSV2	2.378	3.000	.116	.777	2.600	.604
ACSWCD2	2.362	3.000	.107	.735	2.521	.540
VOAGDT2	1.362	1.000	.107	.735	1.135	.540
INEMSV2	1.021	1.000	.021	.146	1.011	.021
CYHLDT2	1.106	1.000	.063	.429	1.034	.184
CYWLDT2	1.043	1.000	.043	.292	1.022	.085
USACEG2	1.043	1.000	.030	.204	1.022	.042
CTYCOM2	1.489	1.000	.096	.655	1.339	.429
CTCNMM2	1.222	1.000	.083	.560	1.092	.313
DNR2	1.170	1.000	.070	.481	1.073	.231
PURDUE2	1.761	1.000	.121	.822	1.577	.675
CONCROP1	1.925	2.000	.053	.385	11.956	.148
CONCROP2	1.000	1.000	0	0	1.000	0
CONTURE 1	1.961	1.000	.271	1.939	1.229	3.758
CONTURE2	1.000	1.000	0	0	1.000	0
RESIDUE1	1.804	2.000	.125	.895	1.788	.801
RESIDUE2	1.000	1.000	0	0	1.000	0
WINDBRK1	1.294	1.000	.081	.576	1.154	.332
WINDBRK2	1.000	1.000	1.000	1.000	1.000	1.000
BORDERS1	1.780	2.000	.135	.954	1.722	.910
BORDERS2	1.000	1.000	0	0	1.000	0
FELDBRK1	1.234	1.000	.137	.937	1.060	.879
FELDBRK2	1.000	0	1.000	1.000	1.000	1.000
GRADEST1	1.396	1.000	.071	.494	1.328	.244
GRADEST2	1.000	1.000	0	0	1.000	0
GRASSED1	1.531	2.000	.072	.504	1.558	.254
GRASSED2	1.000	1.000	0	0	1.000	0

	MEAN	MODE	STD ERR	STD DEV	MEDIAN	VARIANCE
HPONDS1	1.208	1.000	.059	.410	1.132	.168
HPONDS2	1.000	1.000	0	0	1.000	0
SMOOTHE1	1.041	1.000	.041	.286	1.021	.082
SMOOTHE2	-	-	-	-	-	-
EXCLUDE1	1.780	1.000	.174	1.234	1.548	1.522
EXCLUDE2	1.000	1.000	0	0	1.000	0
PONDS1	1.220	1.000	.059	.418	1.141	.175
PONDS2	1.000	1.000	0	0	1.000	0
STRIP1	1.245	1.000	.171	1.199	1.128	1.439
STRIP2	-	-	-	-	-	-
DRAIN1	1.521	1.000	.084	.583	1.460	.340
DRAIN2	1.000	1.000	0	0	1.000	0
TILES1	1.980	2.000	.034	.244	1.990	.060
TILES2	1.000	1.000	0	0	1.000	0
TREEPLA1	1.245	1.000	.062	.434	1.162	.189
TREEPLA2	1.000	1.000	0	0	1.000	0
SATISFY1	6.650	5.000	.260	1.642	6.333	2.695
SATISFY2	7.050	9.000	.280	1.768	7.227	3.126
INCOME1	5.703	2.000	.339	2.712	6.056	7.355
EMPLOY	1.515	2.000	.062	.504	1.529	.254
INCOME2	78.339	100.000	7.515	57.725	75.250	3332.193
INCOME3	44.878	50.000	3.891	24.913	49.556	620.660
INCOME4	24.071	20.000	4.217	15.780	21.250	248.995
INCOME5	67.887	100.000	5.009	36.469	89.500	1329.948
INCOME6	69.000	100.000	5.010	30.886	79.400	953.946
INCOME7	50.000	10.000	23.094	40.000	50.000	1600.000
MARKET	1857.328	1500.000	245.203	1915.095	1412.500	3667588.791
PRACTICE	1.517	0	.239	2.257	.373	5.093
FAVORPOL	4.774	4.000	.184	1.023	4.412	1.047
FAVORBCP	6.450	6.000	.153	.686	6.269	.471
TAKEPART	29.825	21.000	1.173	7.421	29.167	55.071

Documentation for Data Tape on Black Creek Project

Tape is written in an SPSS[1] system file which is described in the SPSS Manual (1).

Included in the file are the variable names and locations, variable labels and value labels. This information on each variable is given in more detail in the original questionnaires which accompany the tape. Questionnaire (A) was administered by interview methodology to 89 farmers in the Black Creek Watershed in 1974. Questionnaire (B) was administered to 71 of the original 89 farmers in 1976. For additional details on the methodology, consult any of the papers or reports from the Socio-Economic Section of the project, including (2), (3), (4), (5),[2] and (6).

Instructions for Access of the Tape:

(1) Computer system must have SPSS capability

(2) Request tape according to Access SPSS

(3) Use card "GET FILE" and type the file name "ALLEN2" in column 16 of this card

(4) Manipulate file according to standard SPSS procedures.

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[1] Statistical Package for the Social Sciences.

[2] 5 & 6 are available from the authors.

References

1. Nie, Norman H., *et al*. *Statistical Package for the Social Sciences*, 1975 New York: McGraw-Hill.

2. Brooks, Ralph M. and David L. Taylor. "An assessment of attitudes 1975 and agricultural practices among landowners of the Black Creek." pp. 155-196 in *Environmental Impact of Land Use on Water Quality Progress Report*. Chicago: EPA-905/9-75-006.

3. Brooks, Ralph M. and David L. Taylor. "The impact of social attitudes 1975 on managing the environment." pp. 26-41 in *Proceedings of the Non-Point Source Pollution Seminar*. Chicago: EPA-905/9-75-007.

4. Taylor, David L. and William L. Miller. "Social factors that influence 1976 participation in soil conservation: Black Creek Project." pp. 95-112 in *Best Management Practices for Non-Point Pollution Control Seminar*. Chicago, EPA-905/9-76-005.

5. Taylor, David L. and William L. Miller. "Participation through innovation: 1977 A test of a theoretical model." Presented at the annual meeting of the North Central Sociological Association, Pittsburgh, Pennsylvania.

6. Taylor, David L. and William L. Miller. "Rural development through 1977 pollution control: The introduction of innovations by a government project." Presented at the annual meeting of the Rural Sociological Society, Madison, Wisconsin.

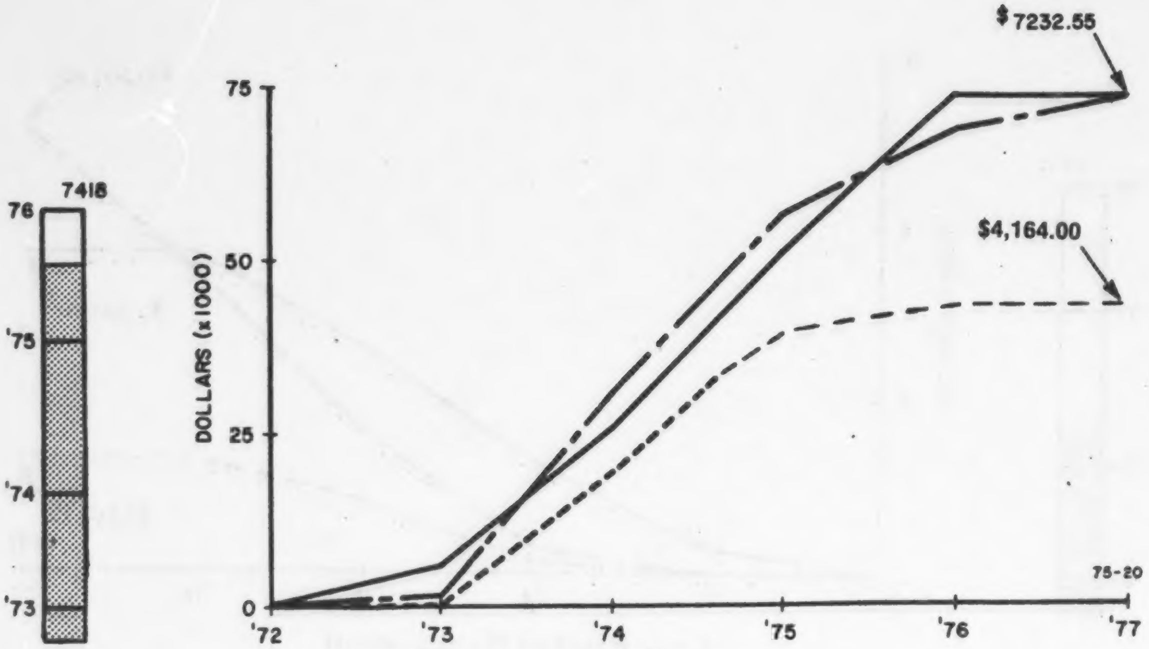
COST DATA

The following information on the installation of various conservation practices was based on the records of the Allen County Soil and Water Conservation District.

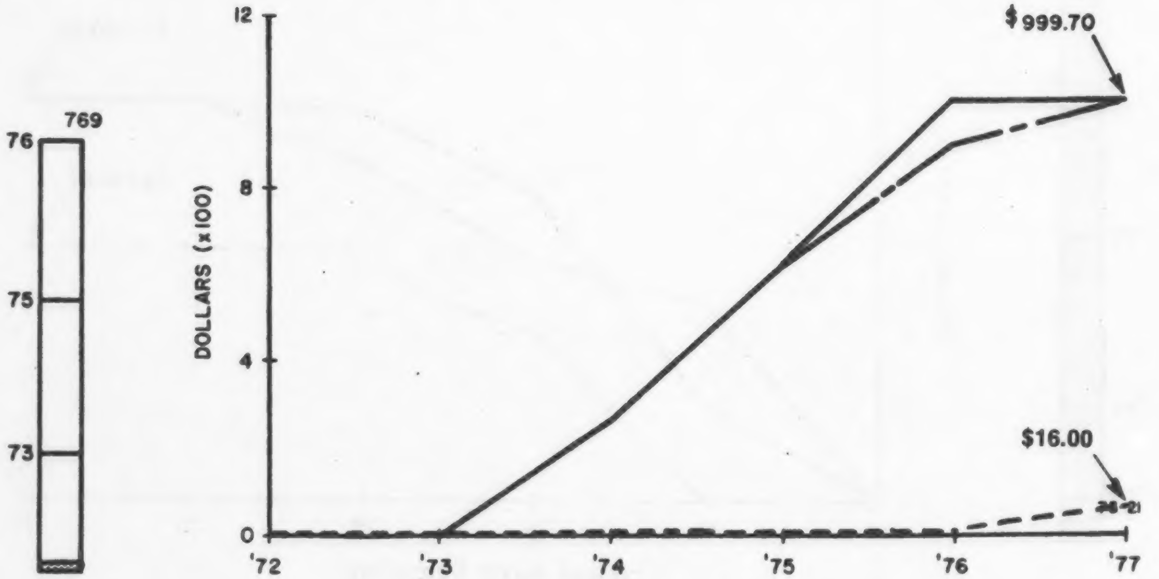
In the figures, the bar graph represents project goals. The shaded portion represents the amount accomplished in the project.

The curves on the graph are as follows:

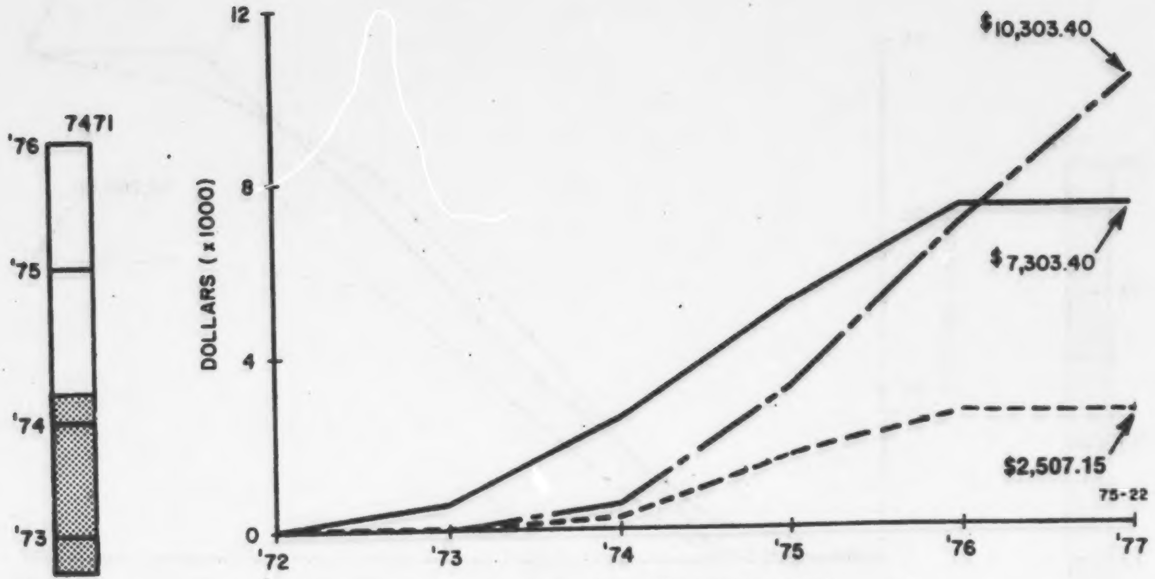
———————— Original budget
———— - ——— Revised budget
– – – – – – – – – – Actual Expenditure



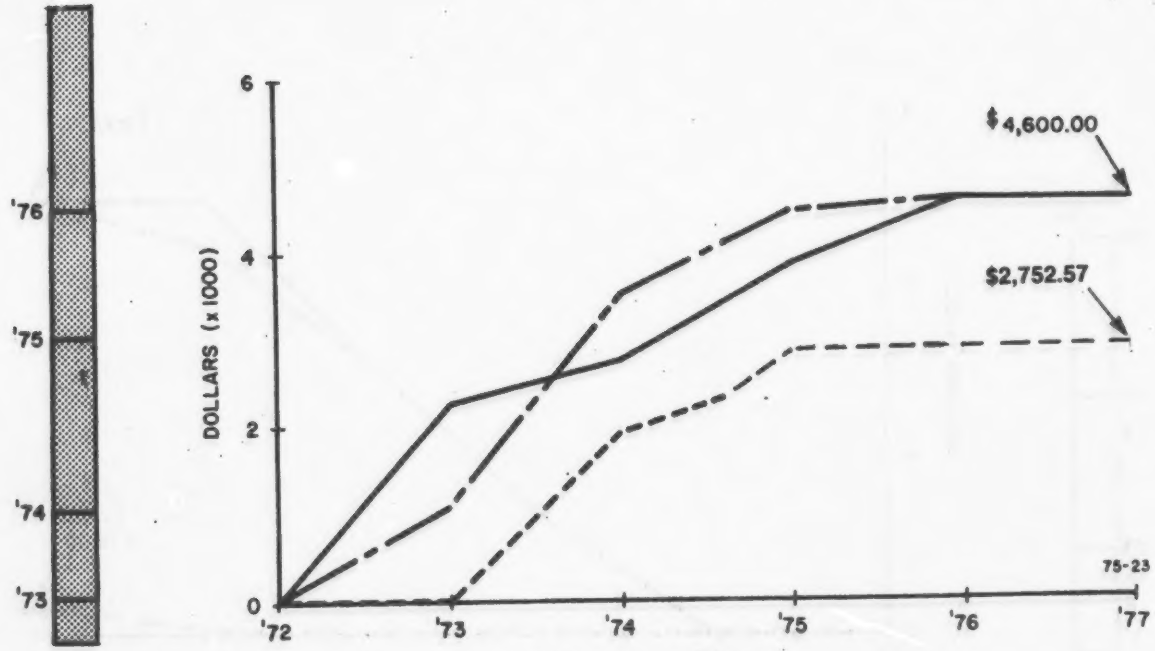
Conservation Cropping System



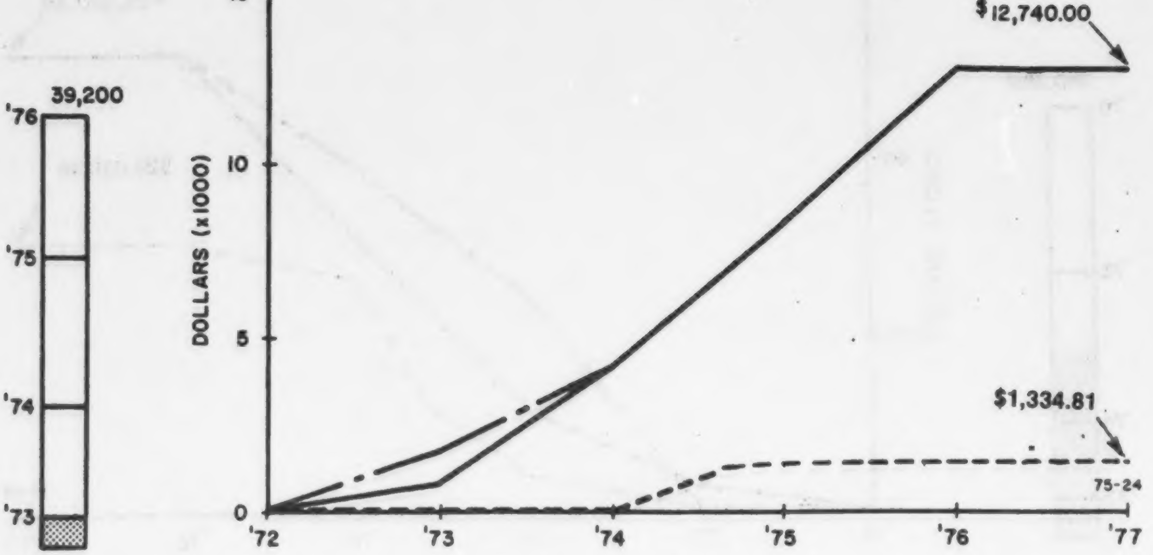
Contour Farming



Crop Residue Management



Critical Area Planting



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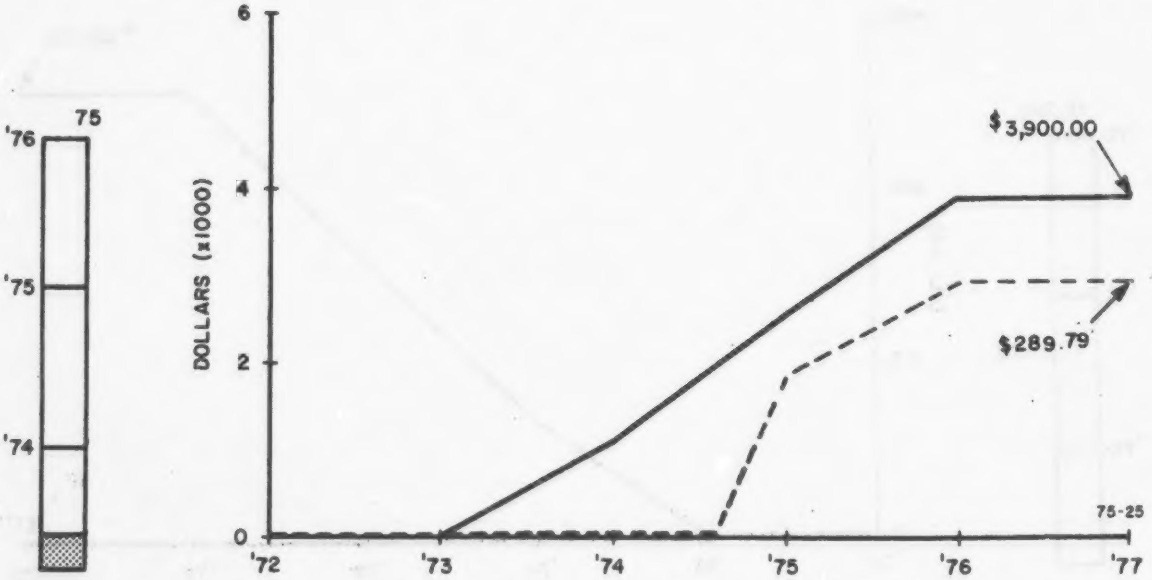
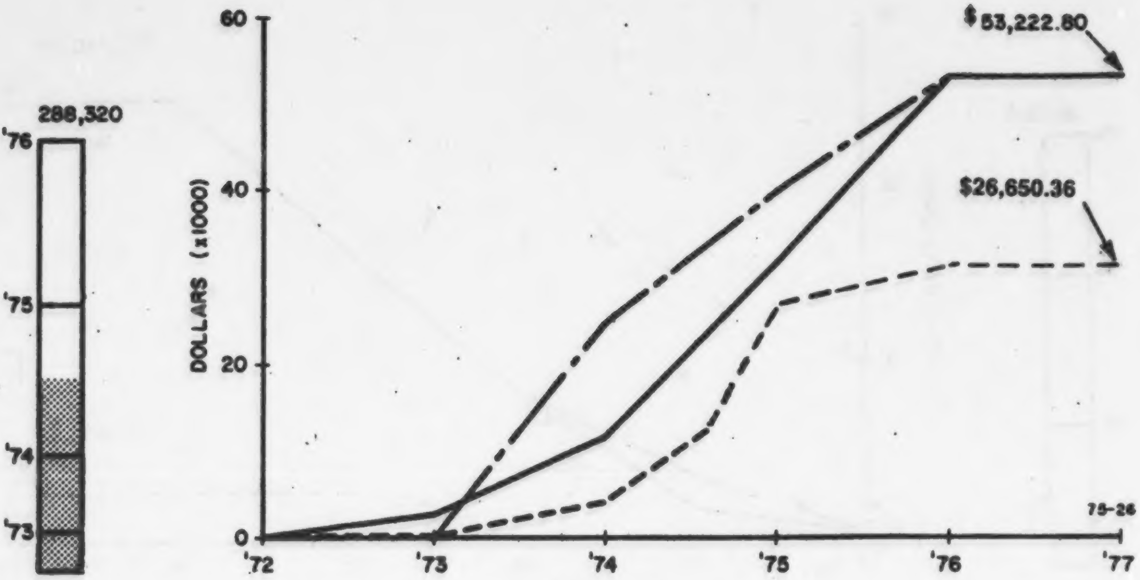
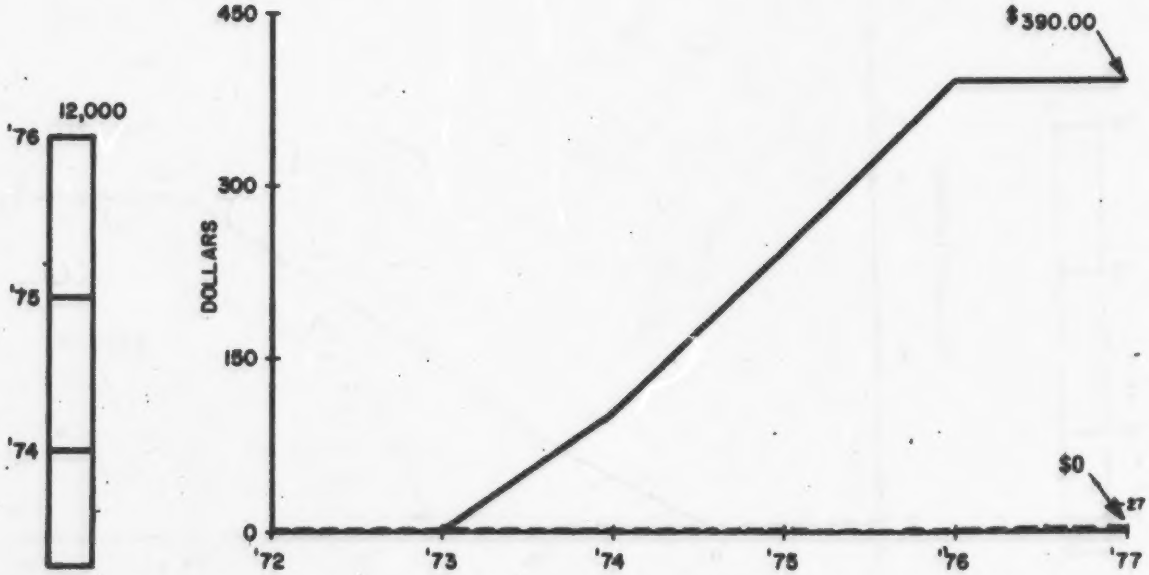


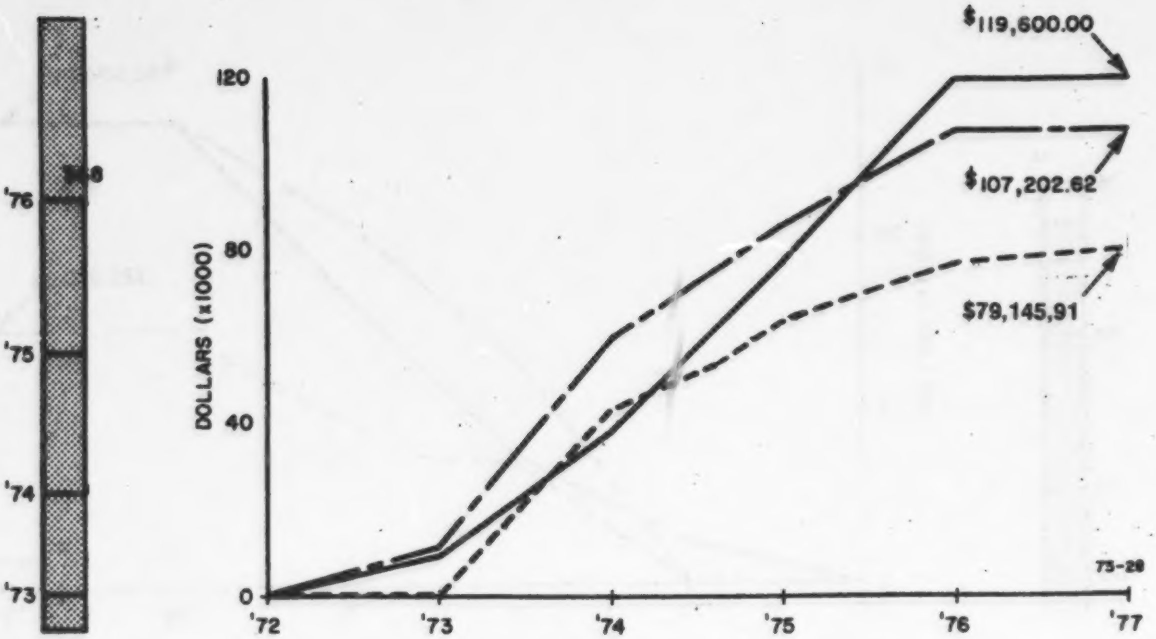
Farmstead and Feedlot Windbreaks



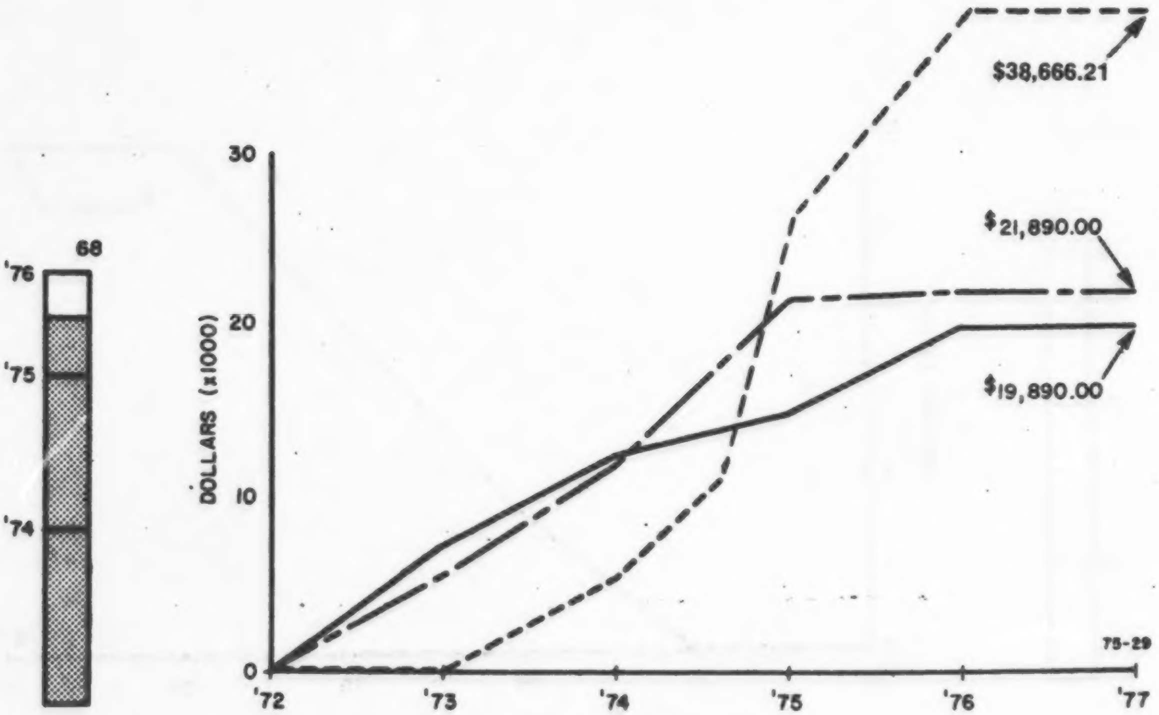
Field Border



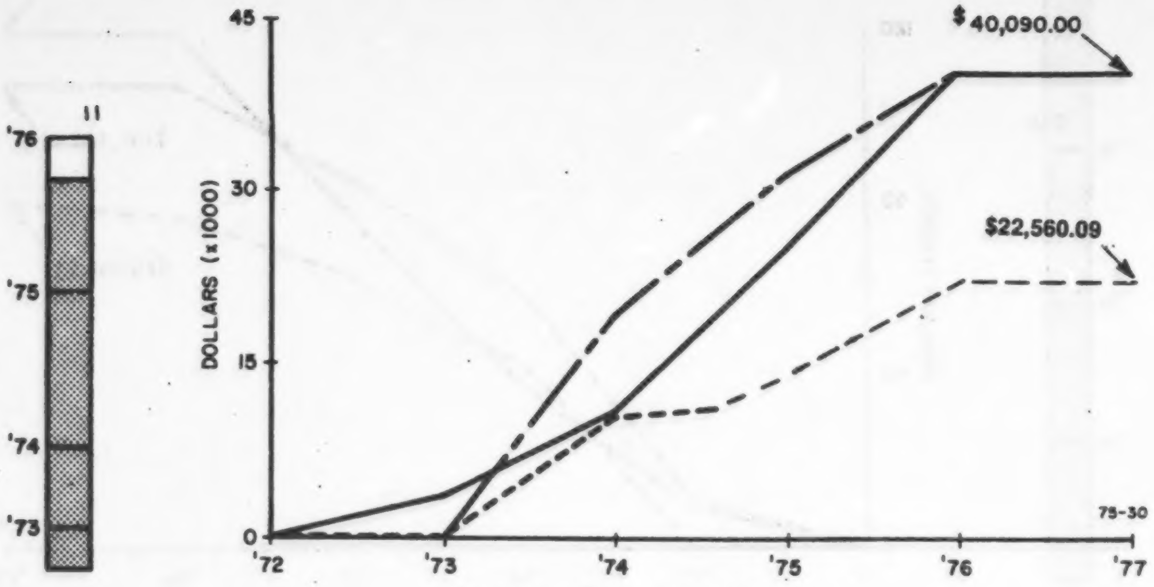
Field Windbreaks



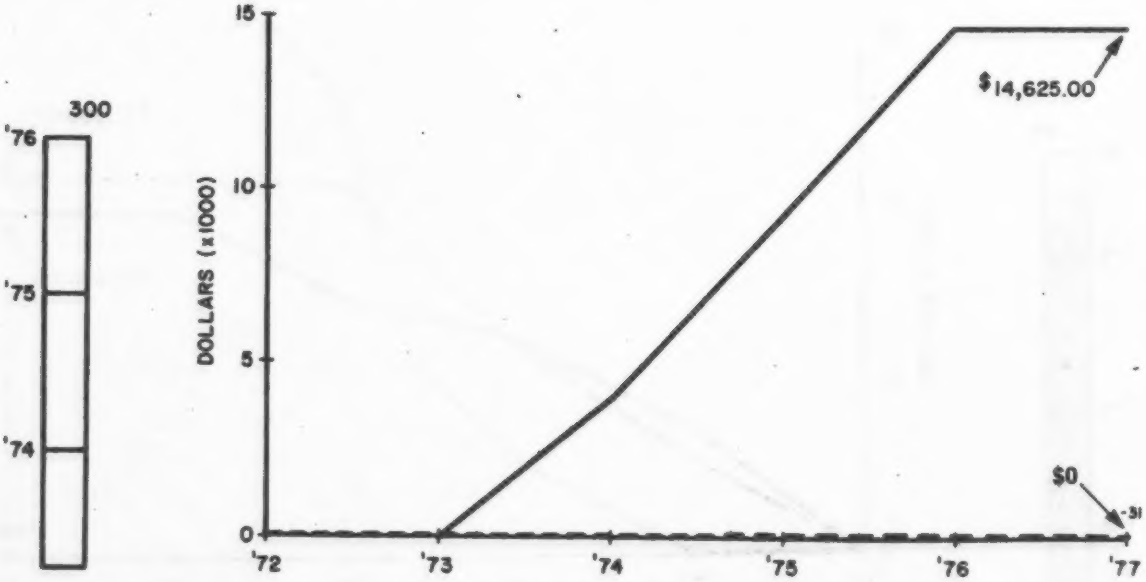
Grade Stabilization Structure



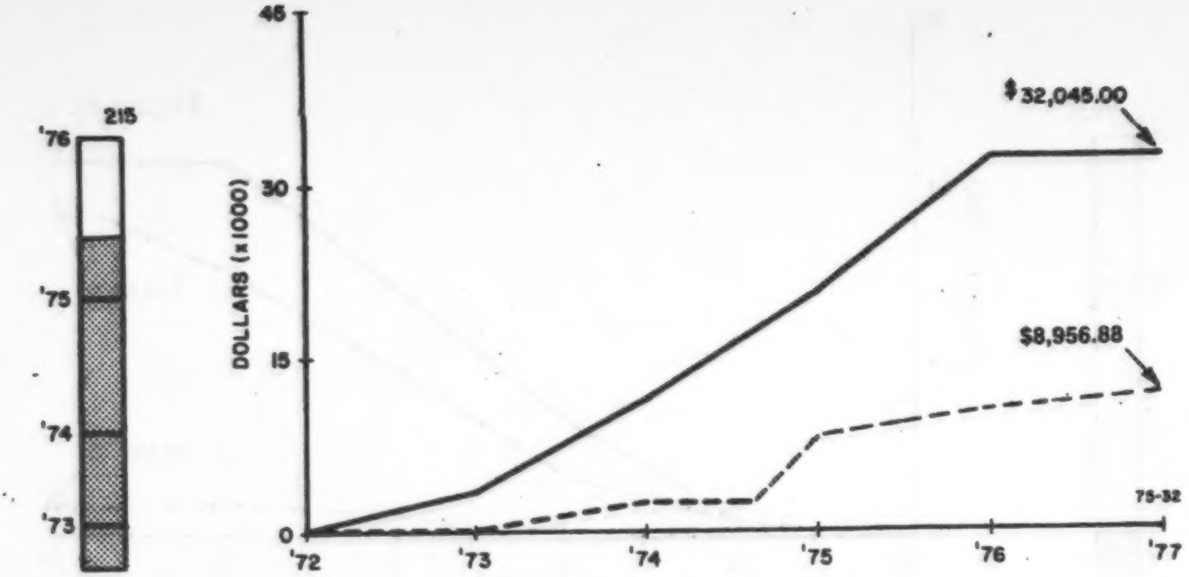
Grassed Waterways



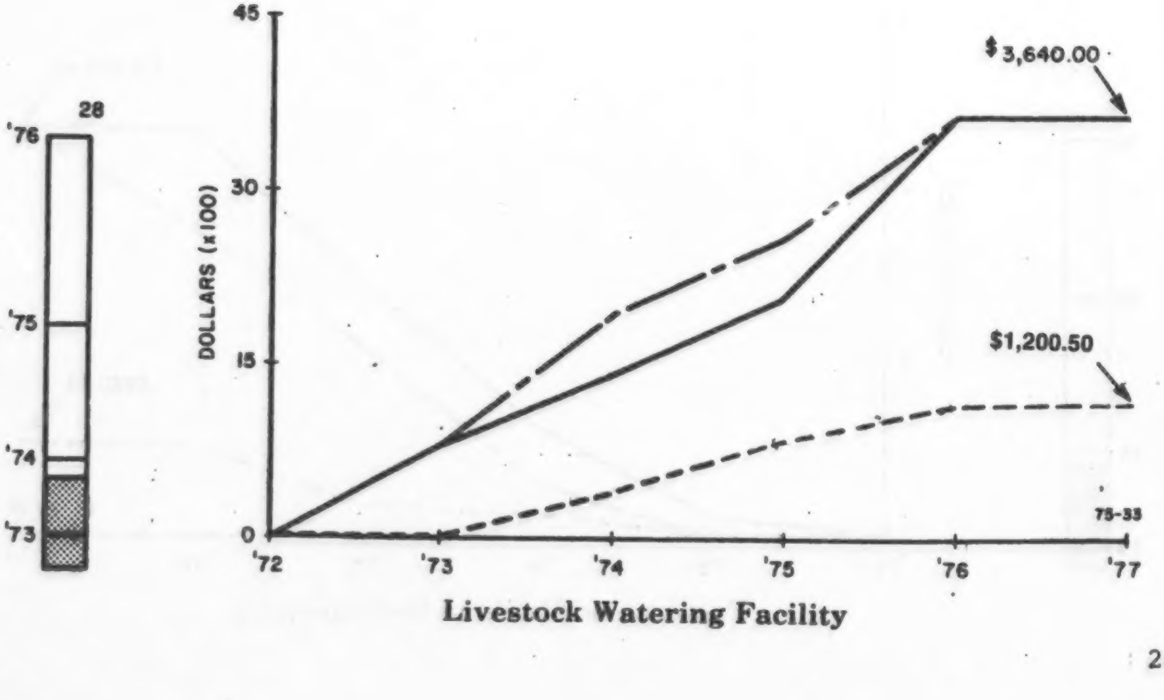
Holding Ponds and Tanks



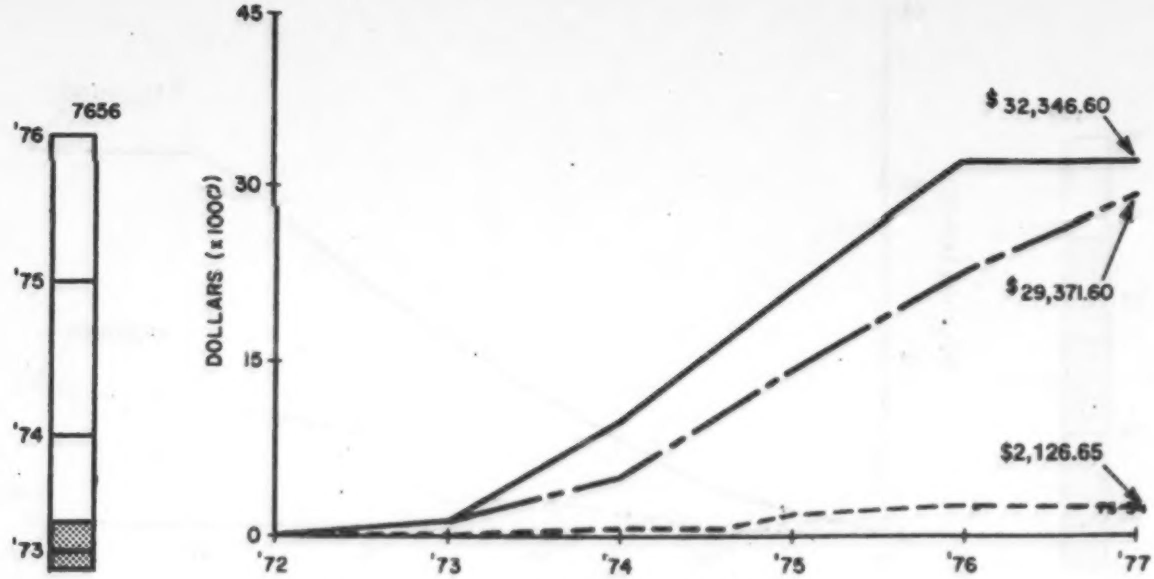
Land Smoothing



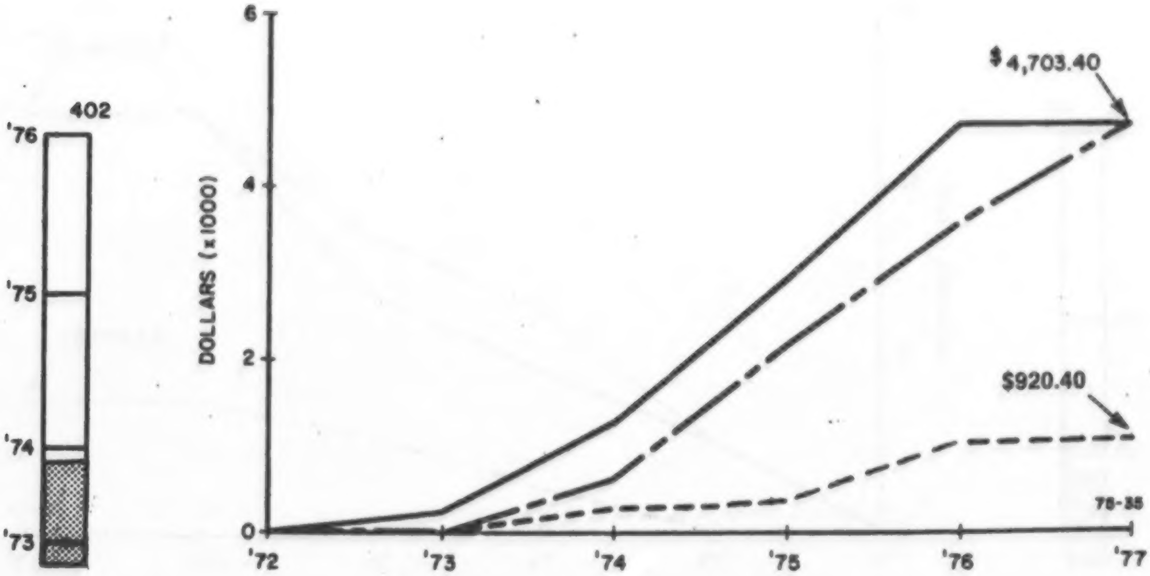
Livestock Exclusion (fencing)



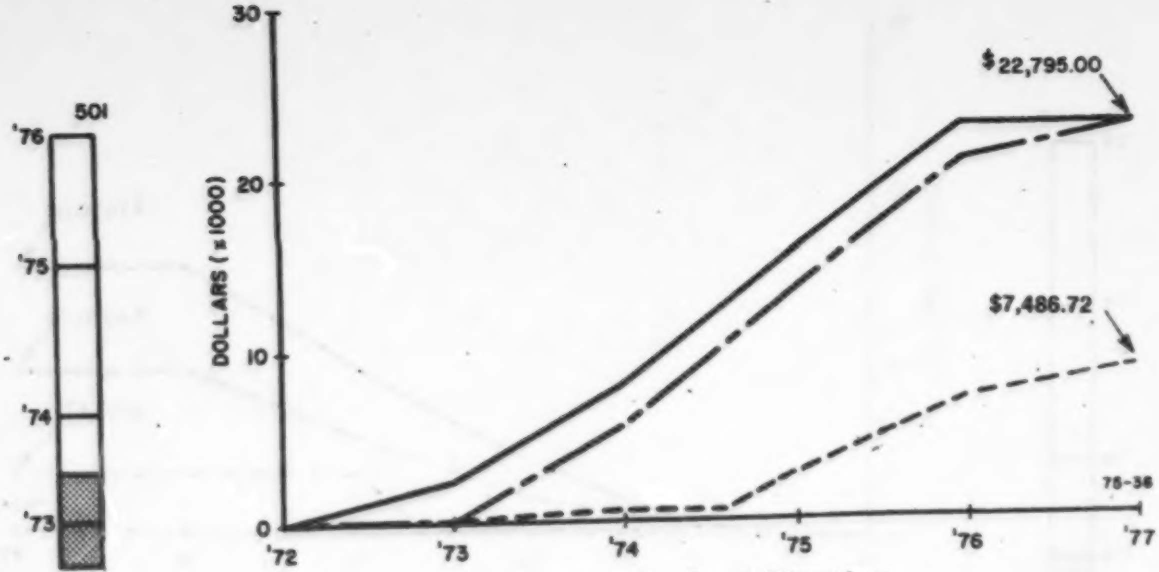
Livestock Watering Facility



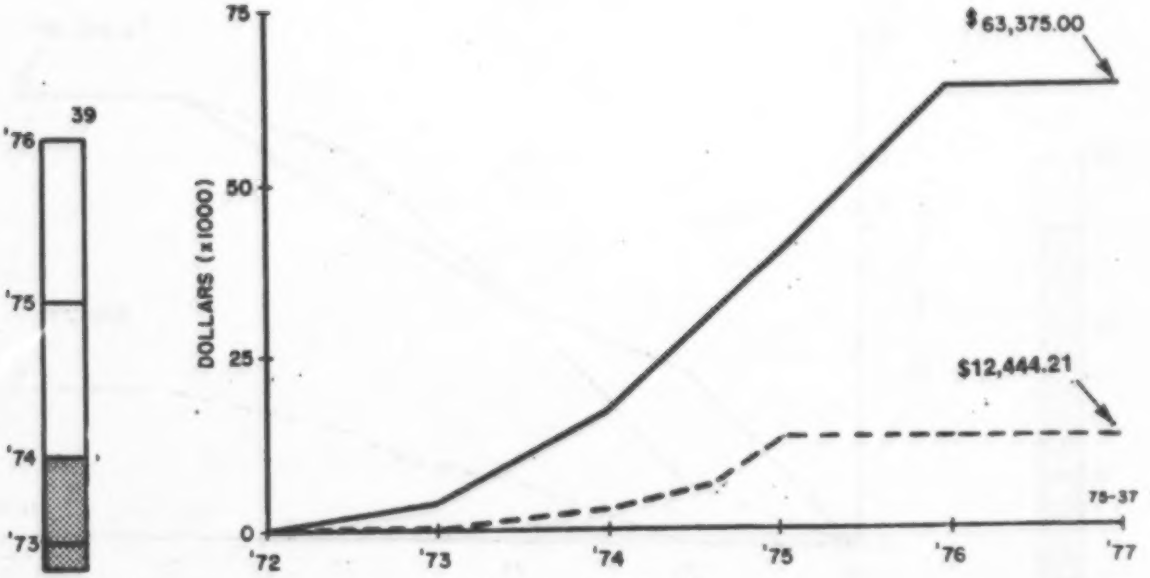
Minimum Tillage



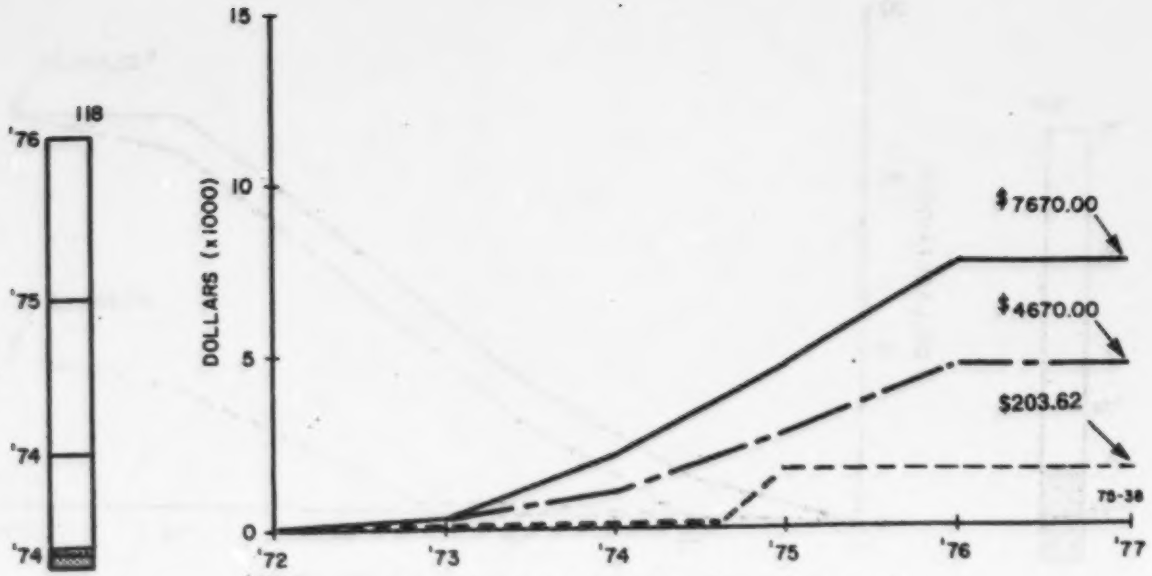
Pasture and Hayland Management



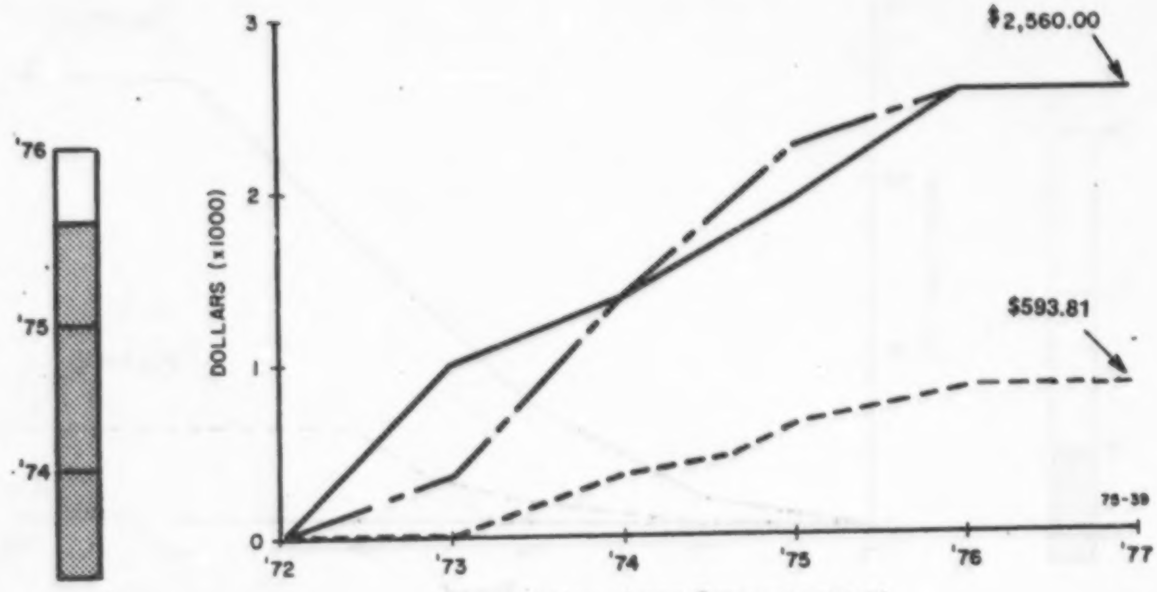
Pasture and Hayland Planting



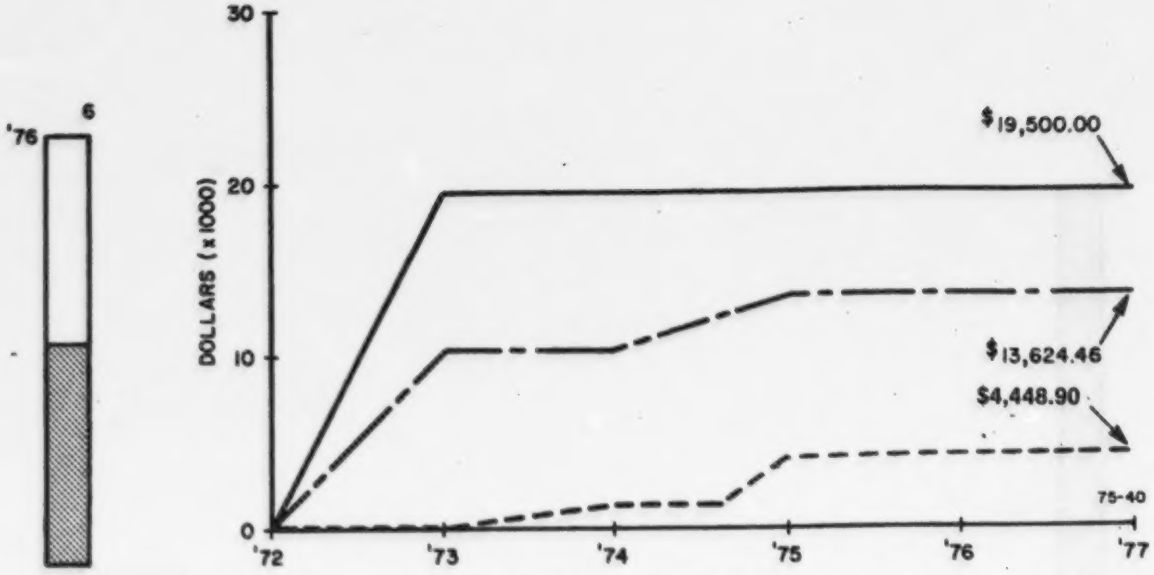
Pond



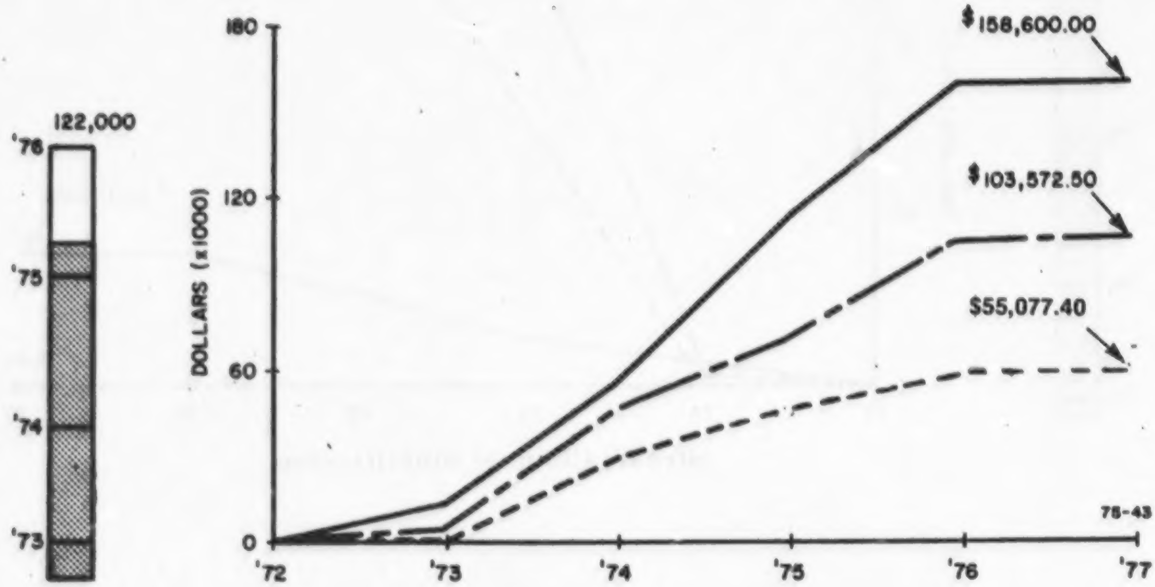
Protection During Development



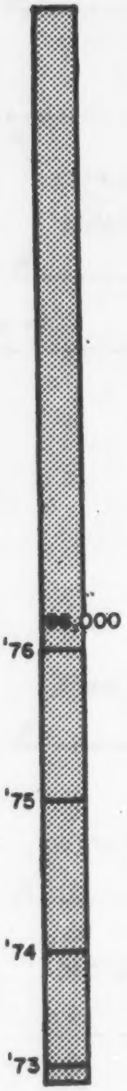
Recreation Area Improvement

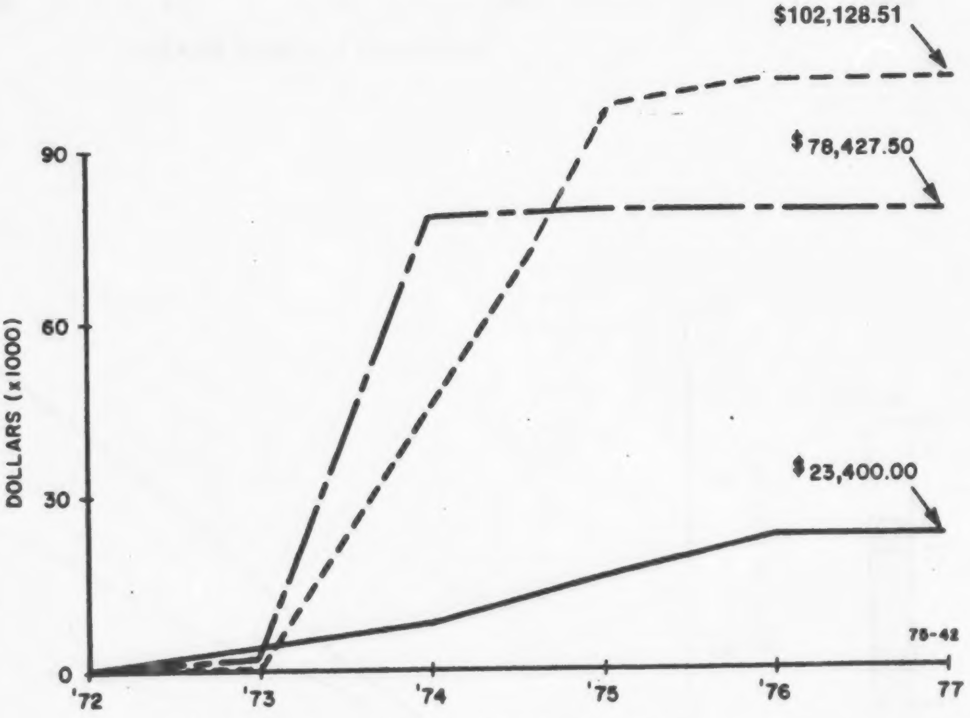


Sediment Control Basins

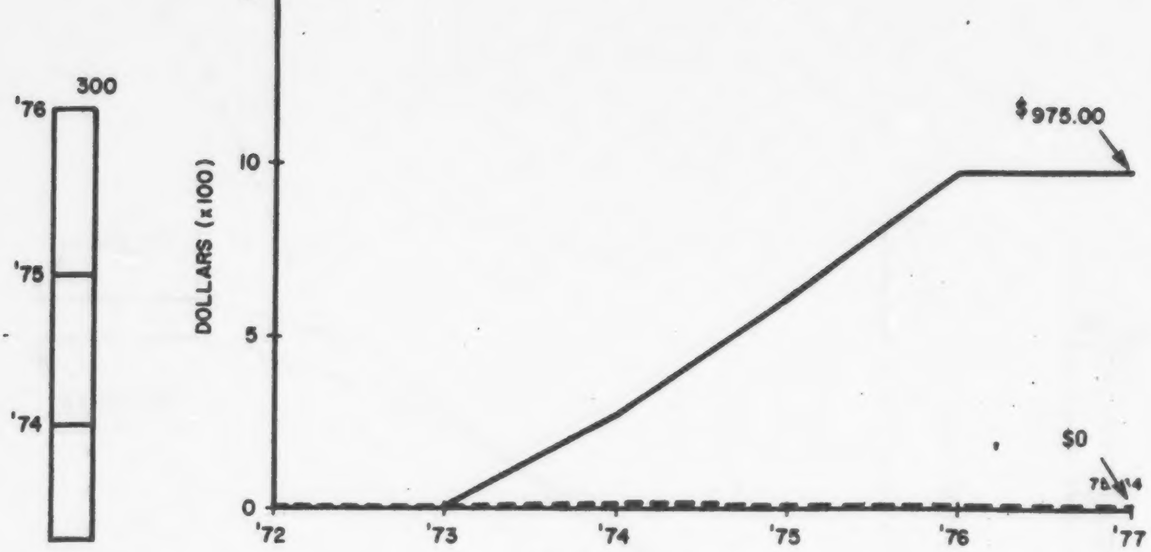


Streambank Protection

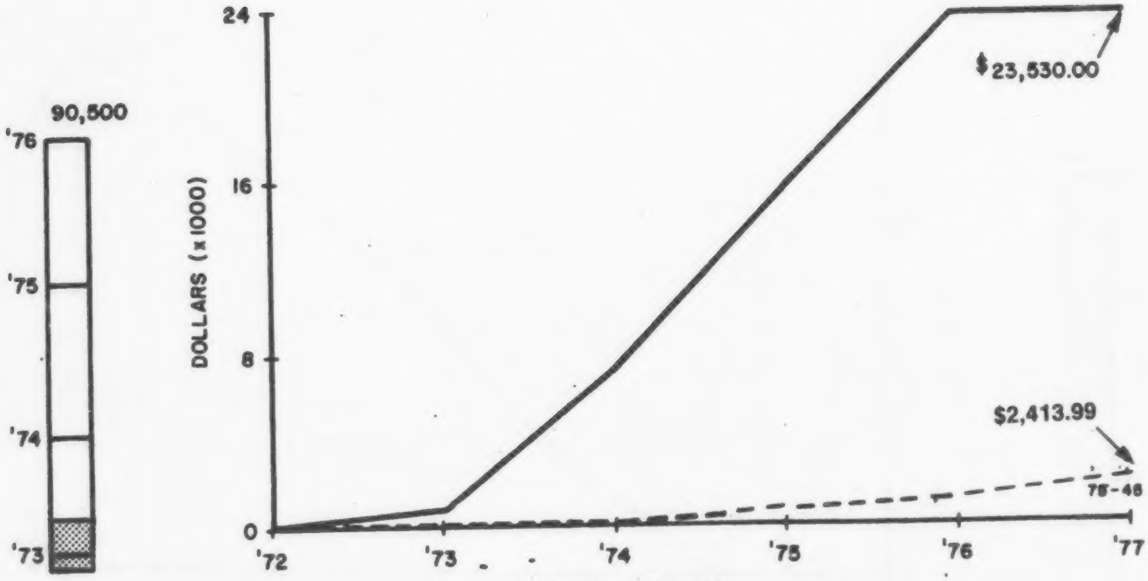




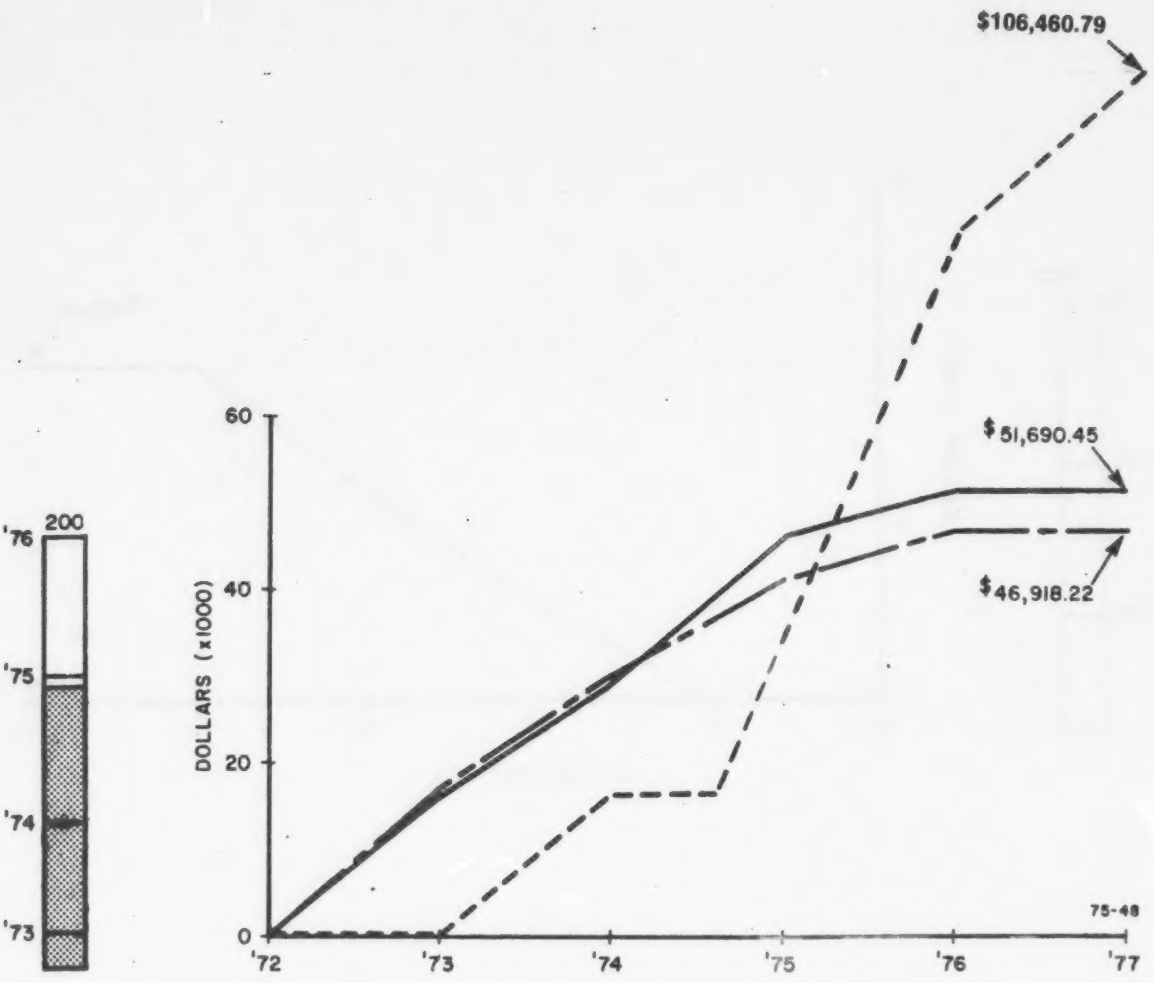
Stream Channel Stabilization



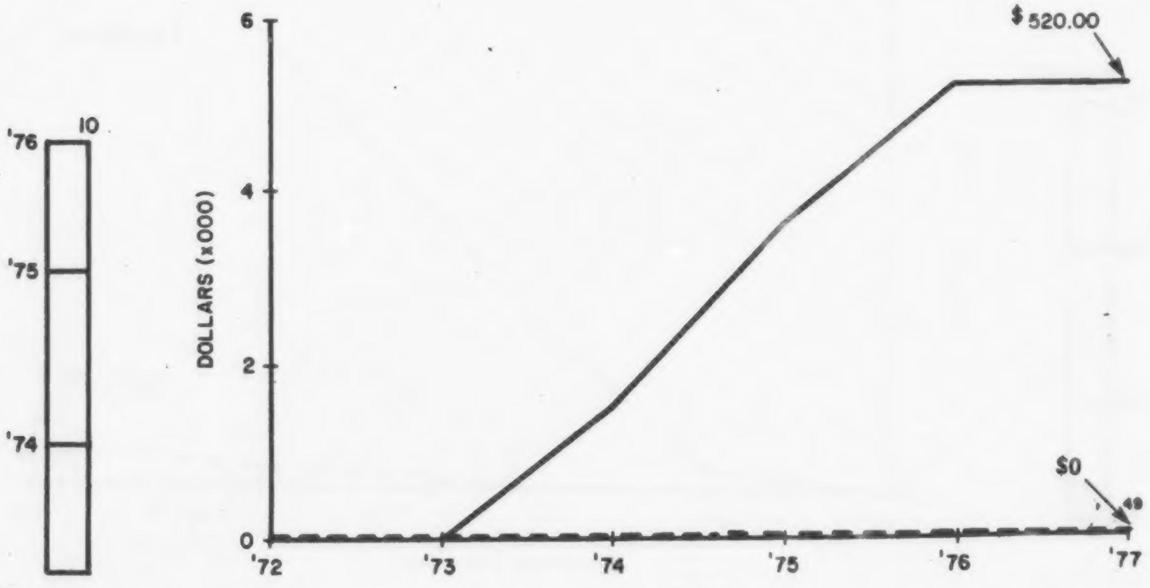
Stripcropping



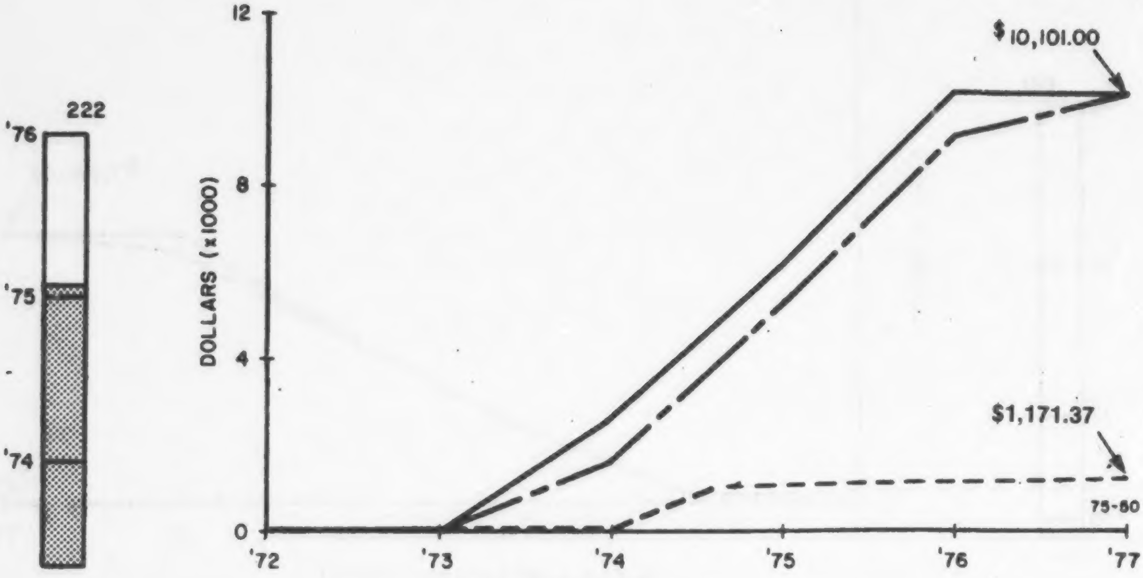
Surface Drains



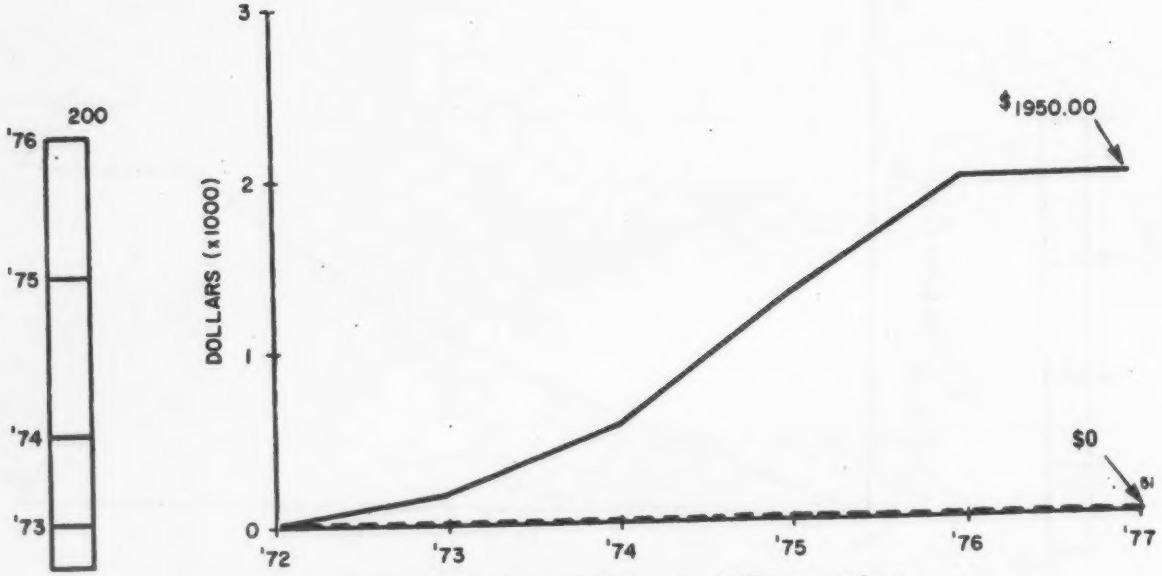
Tile Drains



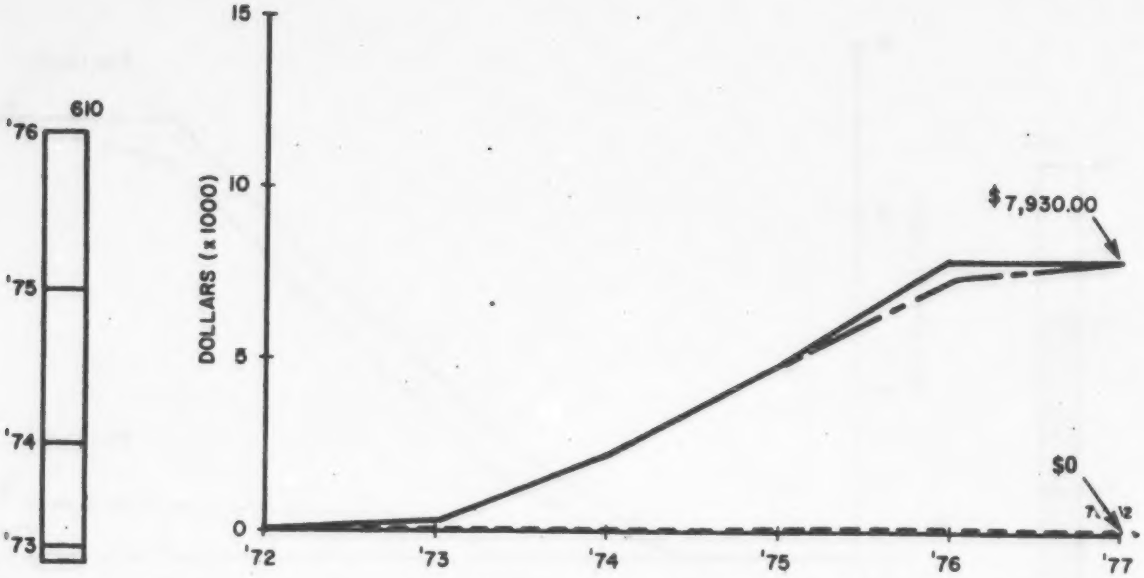
Tree Planting



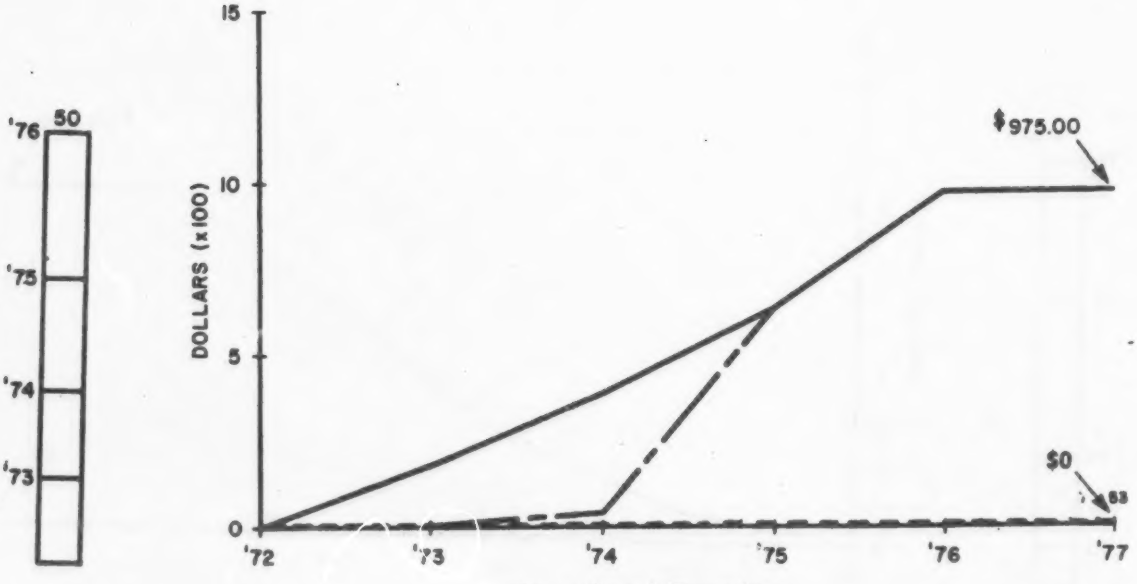
Wildlife Habitat Management



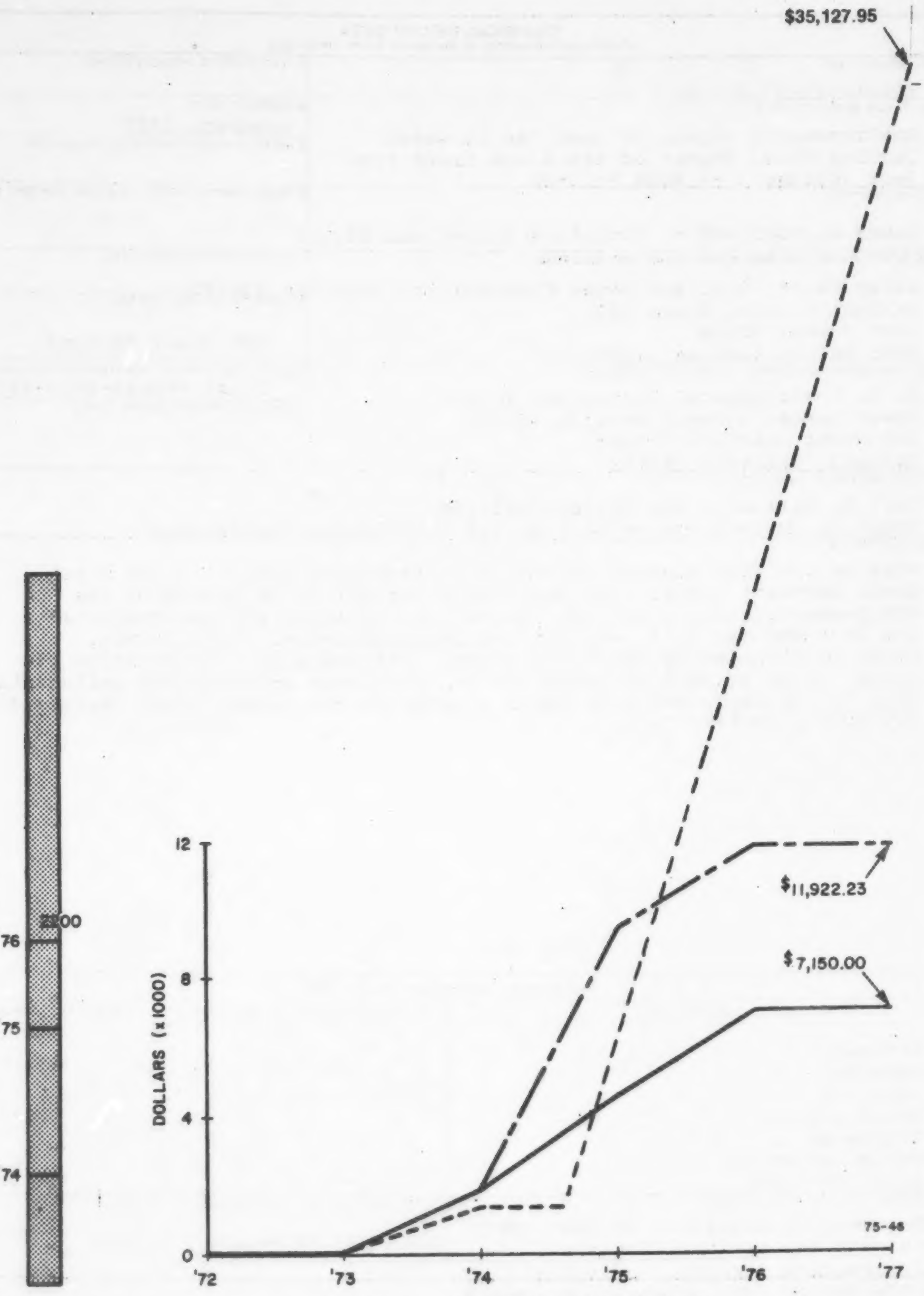
Woodland Improved Harvesting



Woodland Improvement



Woodland Pruning



Terraces, Parallel and Gradient